Declassified E.O. 12356 Section 3.3/NND No. 785019

ACC 146/PWU

10000/150/439
(VOL.2) (II)

PW & U SU
MONTHLY
MAY - NO

Declassified E.O. 12356 Section 3.3/NND No. 785019

10000/150/439
(VOL.2) (II)

PW & U SUB-COMMISSION,
MONTHLY REPORTS
MAY - NOV. 1944

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

14 Nov. 44.

SUMMARY OF ACTIVITIES DURING OCTOBER 1944.

C O N T E N T S

SUBJECT	PARA	PAGE
General Observations.	1	1
Absence on duty of the Director and the Chief of the Electrical Division.	2	1
Special Conferences.	3	1
Confidential Maps for A.A.I.	4	1
Eruption of Vesuvius (March 1944).	5	1
Defascism.	6	2
Mine Clearence.	7	2
Flooded Railway Tunnel in Rome.	8	2
Funds for Housing and Electrical Rehabilitation.	9	3
Report on Road Conditions.	10	3
Public Utility Rates for Water, Electricity and Gas.	11	3
Electricity Situation in Rome.	12	4
Special Report on the Electric Power Situation.	13	5
Procedure for Approval of Projects.	14	5
Highways, Bridges and Public Works.	15	5
Electrical Division.	16	7
Water Supplies.	17	11
	18	11

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Flooded Railway Tunnel in Rome.	8	2
Funds for Housing and Electrical Rehabilitation.	9	3
Report on Road Conditions.	10	3
Public Utility Rates for Water, Electricity and Gas.	11	3
Electricity Situation in Rome.	12	4
Special Report on the Electric Power Situation.	13	5
Procedure for Approval of Projects.	14	5
Highways, Bridges and Public Works.	15	5
Electrical Division.	16	7
Water Supplies.	17	11
Sewerage.	18	11
Bonifiche.	19	11
Gas.	20	11
Heating of Offices and Quarters.	21	12
Personnel.	22	12
Nominal Roll of Officers.	23	13

Continued:

Declassified E.O. 12356 Section 3.3/NND No. 785019

REGIONAL REPORTS

SUBJECT	PARA	PAGE
Sicilia Region.	24	15
Southern Region.	25	17
Lazio-Umbria Region.	26	19
Abruzzi-Marche Region.	27	21
Sardegna Region.	28	23
Toscana Region.	29	24
Emilia Region.	30	26
Piemonte and Liguria Region.	31	27
Lombardia Region.	32	27
Venezia Region.	33	27

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS ALLIED COMMISSION
APO 394
Public Works and Utilities Sub-Commission

SUMMARY OF ACTIVITIES DURING OCTOBER 1944. 14 Nov. 1944.

1. General Observations.

The opening paragraph of the September report announced that it would be found to be much shorter than its predecessors. In accordance with instructions since received, endeavours have been made to present the substance of the following report in an even more compressed form, and it is hoped that the deliberate condensation will be borne in mind.

2. Absence on duty of the Director and the Chief of the Electrical Division.

The absence of Lt.Col. Jenny (Director) and Lt.Col. Lapper (Chief, Electrical Division) continued throughout October. These Officers had departed for America on 22 Sept., upon a mission which was expected to occupy several weeks. Lt.Col. Jenny returned on 1st Nov. Throughout the month, therefore, there continued to be only two Lt.Colonels at Headquarters instead of four, and their responsibilities were correspondingly heavy.

3. Special Conferences.

Officers of this Sub-Commission attended, in October, a series of conferences with representatives of the Foreign Economic Administration and of the Ministry of Production (London), in connection with the intention to place Dollar-Sterling credits. It is unnecessary to go further into the matter in this Report, except to say that the Public Works and Utilities Sub-Commission is directly interested to an extent which is probably represented by about 60% of the estimated value of the proposed credits.

4. Confidential Maps for A.A.I.

At the request of A.A.I., this Sub-Commission has recently prepared and furnished maps, showing important

Declassified E.O. 12356 Section 3.3/NND No. 785019

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4. Confidential Maps for A.A.I.

At the request of A.A.I., this Sub-Commission has recently prepared and furnished maps, showing important confidential information which cannot, however, be defined herein. (see also para. 16 (e)).

5. Eruption of Vesuvius (March 1944).

In para. 12 of the September Report, reference was made to the dilatory procedure of the Genio Civile in preparing urgent measures for preventing landslides from the new cone of Vesuvius, and it was related that the Acting Director (Lt.Col. G.E. Rhodes, R.E.) and the Regional Engineer, Southern Region Col. L.J. Hensley, C.E.) had devoted a day to a personal site reconnaissance of the project. As a result of their investigations

Declassified E.O. 12356 Section 3.3/NND No. 784049

it was definitely concluded that no preventive measures could be effected this winter, that the period of extreme urgency had therefore passed, and that, in any case, the plans and estimates which had been put forward by the Genio Civile were considered to be technically unsound. Moreover, the scheme which the Genio Civile had prepared was probably extravagant and likely to be wasteful of money, materials and labour, an expenditure of several hundred million lire having, in fact, been contemplated. However, as such matters, requiring no critical materials, will be left to the Italians to decide, this Sub-Commission will only take an advisory interest in the future.

6. Defascism.

Defascistination of the staff of the Genio Civile, and of certain Agencies partially dependent upon it, was referred to in para. 3 of the September report. During October, communications received from the Ministry of Public Works, regarding progress of epuration, continued to be satisfactory. Under instructions recently issued, special efforts are to be made in November to ensure that the Ministry will deal with cases down to and including Grade IV.

7. Mine Clearance.

Reference to this subject was made in para.5 (b), (c) and (d) of the August report and in para. (a) of the Lazio-Umbria section of the September report.

Arrangements that other departments of the Commission have already made for mine clearing need not be gone into here, but the extent of the task is well exemplified by the fact that in one comune alone (in Abruzzi-Marche Region) the estimated number of mines to be lifted is no less than 150,000.

The urgency and importance of the vast general problem of mine clearance cannot be over-emphasised and it is obvious that whatever measures be adopted for contending with it ought to be no less than commensurate with its own magnitude. It is hoped that the work of mine clearing will be prosecuted with the utmost vigour. In the meantime, lives are being lost and important works are being seriously delayed.

8. Flooded Railway Tunnel in Rome.

In the middle of October the Ministry of Communications (Italian Government) appealed for assistance in connection with a flooded portion of the partially constructed tunnel of the

Declassified E.O. 12356 Section 3.3/NND No. 785019

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8. Flooded Railway Tunnel in Rome.

In the middle of October the Ministry of Communications (Italian Government) appealed for assistance in connection with a flooded portion of the partially constructed tunnel of the " Ferrovie Metropolitane di Roma ". The Ministry took the view that the accumulated water might menace public health by becoming a breeding ground for the larvae of anopheles mosquitos, thus possibly spreading malaria in the City. On the strength of this contention, the Ministry hoped that the A.C. would provide powerful temporary pumping plant for removing the large quantity of water.

The flooded tunnel was inspected by Officers of this Sub-Commission who found that, although the quantity of flood water was great, and very extensive in surface area, it lay

Declassified E.O. 12356 Section 3.3/NND No. 785019

almost wholly in complete darkness. There were, admittedly, lesser pools of water exposed to daylight in the open excavations at each end of the flooded tunnel, but these presented no serious problem. After consulting Officers of the Malaria Control Division of the Public Health Sub-Commission, and obtaining from them confirmation of its own views, this Sub-Commission informed the Ministry of Communications that there was no need to pump out the water and that it would be sufficient to treat the exposed pools with Paris Green at weekly intervals during the Malarial season.

9. Funds for Housing and Electrical Rehabilitation.

An important conference with the Minister of Public Works and his Director General was held on 26th October. Primarily in connection with the financing of housing projects and electrical rehabilitation it had the essential purpose of hastening the preparation and promulgation of necessary Decrees. Notes on the findings of the conference were promptly sent to the Minister for his comments, and his reply contained an assurance that the proposed Decree relating to the construction and repair of dwellings would be further examined by the Council of Ministers at its meeting on 7th November.

Technical aspects of housing and electrical rehabilitation are dealt with elsewhere in this Report.

10. Report on Road conditions.

It was announced in para. 7 of the September Report that this Sub-Commission had established a small "Road Reports Bureau" with the object of collecting information on road conditions from officers returning from tours. It can now be reported that the Bureau is functioning well and promises to be of great value to travellers, especially during the coming winter. It has, in fact, already been of good service, for during the latter half of October, when many roads were closed on account of flood conditions, its fund of information was much in demand. Through the medium of dozens of telephonic inquiries each day the Bureau was able to furnish officers with advice on projected journeys in all parts of liberated Italy. It must be understood, however, that because the data are obtainable only from officers returning to this Headquarters, or from some casual sources, it may not always be possible to supply comprehensive information about every route.

11. Public Utility Rates for Water, Electricity and Gas.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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11. Public Utility Rates for Water, Electricity and Gas.

The provisional augmentation of Public Utility rates is a subject that has claimed much attention during the past ten months and has, in fact, been a heavy burden. So much has this work increased that, a month or so ago, it became evidently necessary to transfer to the Italian Government as much as possible of the labour and responsibility involved. Accordingly, at the instigation of this Sub-Commission, the Economic Section convened, during the month, two conferences, at which the Finance and Legal Sub-Commissions, and other interested branches,

Declassified E.O. 12356 Section 3.3/NND No. 785019

were represented. In addition there have been private consultations and much inter-departmental correspondence. The purpose of all this activity was to frame future policy and to approve in a satisfactory form the draft Decree which the Italian Ministry of Public Works had proposed for regulating the matter. It is confidently expected that the final draft of the Decree will shortly be approved, and thereafter the Italian Government will be pressed to promulgate it with the utmost speed.

As the work is continually growing, it will readily be appreciated that the extensive financial investigation and complex calculations entailed in establishing Public Utility rates could not be permanently undertaken by the limited engineering staff of this Sub-Commission. Moreover, in Italian Government territory, excepting the Allied Commission's responsibility for maintaining an overall surveillance of prices, the adjustment of Public Utility rates is properly the concern of the Government.

12. Electricity Situation in Rome.

The inconveniences experienced in Rome on account of the general shortage of electric power, accentuated recently by unfortunate breakdowns in the local thermal generating stations, are not difficult to appreciate. Nevertheless, this Sub-Commission has not felt satisfied that the distribution of the limited power available has always been planned to the best advantage, although it must be conceded that the problem of electricity rationing in the Capital has never been easy.

Feeling dissatisfied with the situation, and firmly believing it to be capable of appreciable improvement, the Acting Director (Lt.Col. C.E. Rhodes, R.E.) conferred with the Acting Chief of Staff of the Economic Section and also addressed to him two letters on this subject, dated 21st and 30th October. The epitome of the Acting Director's contentions was that the inconveniences recently experienced, such as the prohibition of the use of lifts and the frequent interruptions of the lighting service, might have been obviated by a more judicious allocation of the available power. The rationing of electricity in Rome was, however, in the hands of the Electricity Control Board of Rome Allied Area Command and not in the hands of this Sub-Commission. The Acting Director expressed the opinion that the Allied Commission itself ought to be empowered to take a hand in the matter, and he emphasised that this Sub-Commission had in no wise been responsible for the inconveniences before mentioned, nor had it been in a position to endeavour to mitigate them.

In this connection it may be noted that the AFHQ letter

Declassified E.O. 12356 Section 3.3/NND No. 785019

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In this connection it may be noted that the AFHQ letter of 18 October 44, entitled "Electricity Control ", after declaring that the responsibility for local electricity control will rest with the Military Commander in each area, goes on to state that "close co-ordination with the local Allied Military Government - Allied Control Commission representative will be effected."

The Acting Director also had a long interview with the Chairman (Major Hughes) of the Electricity Control Board, R.A.A.C., and the afterwards confirmed his views in a letter to the Chairman, dated 30th October. He learned that the A.C. had originally been directly represented on the Board, but that its

Declassified E.O. 12356 Section 3.3/NND No. 748019

representative, Lt.Col. Andrews, had left Rome some time ago and had not been replaced. Arrangements were thereupon made for his place to be taken by Capt. L.W. Laughlin, an Officer of the Electrical Division in the Headquarters of this Sub-Commission. Very properly, therefore, the A.C. is now directly represented on the Board by a well-informed officer of the Department which carries the bulk of responsibility for power production. (Vide paras. 16(a) and 22).

13. Special Report on the Electric Power Situation.

A comprehensive report, entitled "The Electric Power Situation in Liberated Italy", setting out the whole electrical position as on 31st Oct., was furnished to the Acting Chief Commissioner for Presentation to the Advisory Council at its meeting on 3rd November.

14. Procedure for Approval of Projects.

As the program of general reconstruction and rehabilitation in all its phases has developed, it has been necessary from time to time to alter, and improve upon, the procedure laid down for the submission, examination and approval of projects. The culmination of these changes, all of which had the purpose of reducing delays to a minimum, is represented by the procedure which is now set out in Appendix (A) of this Report. Although quite recently evolved, it has already proved remarkably satisfactory.

NOTE: (Amendment, at p.5 para 14)
Appendix (A) is now inserted as page 15, herewith.

15. Highways, Bridges and Public Works.

(a) New contracts entered into in October:-

- Military highways and bridges ..... No. 53
- Miscellaneous work, including buildings, works in ports, and works on provincial roads and bridges ..... No. 41

Expenditure and commitments on Military Highways and Bridges - originally set from a special fund of 600 million Lire which was set up last February - have now reached a total of nearly 677 million Lire, the original fund having already been exceeded in September. The total of expenditure and commitments on miscellaneous work (defined above) since January last has reached approximately 446 million Lire. The total of expenditure and commitments on both classes of work (i.e. military highways and bridges and the miscellaneous items)

Declassified E.O. 12356 Section 3.3/NND No. 785019

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15. Highways, Bridges and Public Works.

(a) New contracts entered into in October:-

- Military highways and bridges ..... No. 51
- Miscellaneous work, including buildings, works in ports, and works on provincial roads and bridges ..... No. 41

Expenditure and commitments on Military Highways and Bridges - originally met from a special fund of 600 million Lire which was set up last February - have now reached a total of nearly 877 million Lire, the original fund having already been exceeded in September. The total of expenditure and commitments on miscellaneous work (defined above) since January last has reached approximately 446 million Lire. The total of expenditure and commitments on both classes of work (i.e. military highways and bridges and the miscellaneous items) amounts, therefore, to approximately 1,323 million Lire.

The rate of expenditure on these services still continues to increase.

(b) Roads. (General)

In the September report, reference was made to difficulties that were expected to arise on certain main routes in which demolished bridges had been replaced by [illegible] ferries, either by earth fills or by inadequate wooden structures. The anticipated

Declassified E.O. 12356 Section 3.3/NND No. 784019

trouble was realised during October in consequence of the extensive rains. Road blockages, caused by the washing away of earth fills or temporary bridge structures, occurred at various times on Routes 1,2,3,5 and 7, but by the execution of considerable emergency work, carried out both by contractors and by Military units, most of the interruptions were reduced to short periods. Route 1 still remains blocked in three places, but emergency repairs are well in hand and will be continued with all possible speed. Emergency repair crews are being organised on every main route to supplement the efforts of regular contractors. It is intended that these crews shall be as mobile as the transport situation will allow, and that they shall function as "floating gangs", available wherever the need may be most critical.

Permanent reconstruction of bridges is proceeding rapidly, although occasionally it is retarded by insufficient supplies of materials, particularly cement.

On route 6, near Ceprano, by means of day and night work, a large concrete arch bridge was hastened to completion on 20th October, in time to carry the heavy truck traffic occasioned by the "wash-out" of the main railway line near Cassino. All railway freight is being unloaded at Cassino and "ferried" by truck to Ceprano, where it is re-loaded on rail. This movement would have been severely hampered had it been necessary to use the one-way Bailey bridge that was in temporary service until completion of the permanent structure.

No serious difficulties are being encountered in the maintenance of road surfaces, which is progressing well and is limited only by bitumen supplies and restricted transport.

(c) Housing.

New schemes continued to flow in from the Italian Ministry of Public Works during October, all of them relating to projects in Lazio-Umbria Region. Up to the end of the month the schemes approved for execution can be summarised as follows:-

1.	Repairs	850 apartments	L. 31,484,000
2.	New constructions	494 "	L. 116,115,000
		1,344	L. 147,599,000

These projects relate to sixteen Communes situated variously in the Provinces of Littoria, Frosinone and Rome. They do not, of course, include widespread and extensive repairs to privately owned dwellings, which repairs are observed to be proceeding at a promising pace and are being encouraged and aided in every possible way by this Sub-Commission.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Current estimates of cost for public housing schemes still seem to be unreasonably high (vide para.17 (d) of the September report) but all efforts to secure better prices have as yet been of no avail.

Reference to the financing of housing projects is made also in para. 9 of this Report.

Declassified E.O. 12356 Section 3.3/NND No. 785019

16. Electrical Division.

(a) AFHQ Memorandum No. 43.

Reference to the above named Memorandum has already been made in para. 20 (b) of the September report, wherin the heavy additional responsibilities assigned to the A.C. by the provisions of that instruction were defined in detail. Even a cursory consideration of those responsibilities will have made it apparent that the Allied Commission - and therefore this Sub-Commission - has been made the "main spring" of electrical reconstruction activities in Italy. (The Sub-Commission's consequent need of additional specialist personnel is dealt with in para. 22 hereof).

(b) Conference with Electric Operating Companies.

A conference has been arranged with engineering representatives of the principal electric operating companies for the purpose of establishing a program relative to all generating plant and transmission systems that are capable of being restored to operation by 31st December 1944. This program, already prepared in draft, will extend by a further period of nine months the existing six months plan developed in detail by the Sub-Commission. As yet, however, there is not sufficient information available for a reliable statement to be made on the generating capacity expected to be made available under the scheme.

(c) Information for F.E.A. and Foreign Office.

Representatives of the Foreign Economic Administration, and the Ministry of Production (London), conferred with officers of this Sub-Commission, and were furnished with requisite information concerning the electric power situation in Italy, particularly Central Italy.

(d) Electrical Rehabilitation Projects and Funds.

The Sub-Commission has now received the first estimates of cost for rehabilitation projects relating to war damage of electrical utilities. They came from the Societa Meridionale di Elettricita, which supplies power to Southern Italy. The estimates have been approved by the Sub-Commission and have been forwarded to the Italian Ministry of Public Works for action in accordance with the arrangements made with that Ministry. Copies of the estimates have been supplied to the Finance Sub-Commission of the A.C. It is expected that similar estimates will be received in due course from all the large

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(e) Electrical Maps.

Elsewhere in this Report, mention has been made of confidential maps which were recently prepared for, and furnished to, A.A.I. At the request of the Chief Engineer, AFHQ, the Electrical Division has also prepared and supplied a large map of scale 1 : 200,000, showing the locations of all electric generating plants of 1,000 KW. capacity or larger, over Italian territory extending from a latitude a little north of Rome up to the Swiss frontier. A copy of this map is available for

Declassified E.O. 12356 Section 3.3/NND No. 785019

inspection by personnel of other Sub-Commissions interested in the information which it affords.

(f) Representation on other Bodies.

During the month, officers of this Sub-Commission took part in meetings and conferences of the Electricity Control Board of S.A.A.C., and the Electrical Committee of the Allied Forces Local (Italian) Resources Board.

(g) General.

In order to secure the most efficient operation of existing power stations and transmission lines, and to co-ordinate the activities of the several undertakings, a central load despatcher has been established at Villavalle. It was installed by the Terni Company at the instigation of this Sub-Commission. The despatcher controls the output of the generators in the Terni Area, and is in direct telephonic communication with this Sub-Commission. Similar arrangements have also been made with a load despatcher in the Rome Area. Every Kilowatt of generating capacity connected to the grid system in Central Italy is, therefore, now under control by this Sub-Commission, which is thereby enabled to effect an impartial and equitable distribution of the total available output. This centralisation of control at Headquarters A.C. makes it possible to adjust the loading of the Rome thermal generating plants in accordance with available fuel supplies, and to ensure the fullest use of power available from hydro-electric stations.

The fuel situation at the Rome thermal stations has been very critical during the month. Operational movements have caused delays in fuel shipments; and land transportation of coal, from Naples and Ribolla to Rome, has been seriously impeded both by a train wreck and by highway obstructions due to floods. Consequently, the ten-day reserve of coal which was available at the beginning of the month has dwindled to the amount of one day's needs and this, of course, has necessitated restriction in the operation of the steam plants in order that sufficient fuel may be kept in hand to maintain the service of essential Military needs in the event of other plant failures. All agencies concerned with the procuring and handling of coal are actively concentrating their efforts to improve the situation.

Because the epidemic of breakdowns in September did not continue in October, the firm generating capacity of the Rome steam plants rose from 10,000 KW on 1 October to 20,000 KW by 31 October. However, the actual energy output of the plants did not increase appreciably, because of the lack of coal. The amount of hydro-generated energy supplied to Rome increased steadily throughout the month, with the result that an increasing

Declassified E.O. 12356 Section 3.3/NND No. 785019

installed by the Italian Electricity Commission. The despatcher controls the output of the generators in the Terni Area, and is in direct telephonic communication with this Sub-Commission. Similar arrangements have also been made with a load despatcher in the Rome Area. Every Kilowatt of generating capacity connected to the grid system in Central Italy is, therefore, now under control by this Sub-Commission, which is thereby enabled to effect an impartial and equitable distribution of the total available output. This centralization of control at Headquarters A.C. makes it possible to adjust the loading of the Rome thermal generating plants in accordance with available fuel supplies, and to ensure the fullest use of power available from hydro-electric stations.

The fuel situation at the Rome thermal stations has been very critical during the month. Operational movements have caused delays in fuel shipments; and land transportation of coal, from Naples and Civitavecchia to Rome, has been seriously impeded both by a train wreck and by highway obstructions due to floods. Consequently, the ten-day reserve of coal which was available at the beginning of the month has dwindled to the amount of one day's needs and this, of course, has necessitated restriction in the operation of the steam plants in order that sufficient fuel may be kept in hand to maintain the service of essential Military needs in the event of other plant failures. All agencies concerned with the procuring and handling of coal are actively concentrating their efforts to improve the situation.

Because the epidemic of breakdowns in September did not continue in October, the firm generating capacity of the Rome steam plants rose from 10,000 KW on 1 October to 20,000 KW by 31 October. However, the actual energy output of the plants did not increase appreciably, because of the lack of coal. The amount of hydro-generated energy supplied to Rome increased steadily throughout the month, with the result that an increasing number of civilian circuits in Rome received energy. The total number of kilowatt-hours generated by the Rome Steam plants during the month was 9,124,500 and the total number of kilowatt-hours supplied to Rome from hydro sources was 7,948,855.

Tramway and "filobus" services in the Rome Area have been restricted with effect from 24th October. Their new schedules provide for discontinuance of the services after 17.30 hours, instead of 18.30 hours as previously, thereby releasing about 4,000 KW. for feeding into circuits of higher priority.

Declassified E.O. 12356 Section 3.3/NND No. 784019

During the month, the Sub-Commission has dealt with numerous important requests, submitted by other Sub-Commissions, for the allocation of electric power for industrial purposes.

The largest was for 14,000 KW., with a proposed consumption of 10 million KWh. per month, for the fertilizer works at Crotone, Calabria, which was planned to resume production in December. Unfortunately, it will be necessary to defer this allocation owing to damage inflicted by lightning on one of the plants of the Sila development near Crotone. The following list is a selection from the many other applications which were handled:

Calce e Cementi di Segni - Colleferro	- 350 KW.
Five brick factories - Lazio-Umbrian Region	- 585 KW.
Confetti - Nocera tramway - Naples Area	- 500 KW.
Guidonia Cement Works - near Tivoli	-1500 KW.
Pieve Sinolunga brick works - near Siena	- 150 KW.
Cartiera Meridionale Paper plant - at Isola Liri -	- 260 KW.
Ilva Steel works Steel Furnaces - Bagnoli	-2500 KVA.
Talcum powder plant - Livorno	- 80 KW.
Aniene chemical plant (Caustic Soda) - Rome	- 350 KW.
S.A.I.P.A. Alum plant, Castellina	- 40 KW.
S.A.T.V. Olive oil pressing plant Villa Sant'Angelo	- 30 KW.
Montecatini - Prestina - (Bone phosphates) Rome	- 30 KW.

Officers of this Sub-Commission continued their tours of inspection and supervision of power plants, sub-stations and transmission lines, under repair. These visits have proved valuable for verifying that work was proceeding expeditiously and that materials essential to repairs were being made available and promptly transported. The tours included inspections of work on power plants at Cepreno, Nera Montoro, Larderello, Terni, Farfa, Castelmadama, Mandela and Castelnuovo, and reconnaissances in connection with contemplated repairs at Pescara and Marino.

The following pertinent excerpts are quoted from the bi-monthly report on the electrical situation in Central Italy:-

Declassified E.O. 12356 Section 3.3/NND No. 785019

Five brick factories - Lazio-Umbria Region	- 585 KW.
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The following pertinent excerpts are quoted from the bi-monthly report on the electrical situation in Central Italy:-

(i) " A new program for the rationing of electric power in Rome, prepared by the Rome Allied Area Command, is expected to start on 1st November. The program calls for more electricity to be made available for civilian use ".

Declassified E.O. 12356 Section 3.3/NND No. 785019

(ii) " The Rome steam plants have been operating more reliably recently under the joint operation set up by this Sub-Commission. More fuel is being received at these plants, although up to now the fuel supply has limited the output of the S.E.E. station. A new difficulty has arisen at the A.C.E.A. plant, in that the high stage of the Tiber has caused debris to be carried into the condensers at the A.C.E.A. plant, and necessitated frequent outages for cleaning."

(iii) " One unit at Cepranc and one at Ferfa are running short circuited at the moment in order to dry the windings prior to being connected to the system. Both the Cepranc units, as well as the one at Ferfa, are expected to be on the line by 7 November."

(iv) " The frequency of the Terni 50-cycle system has been very low during the last two weeks. A satisfactory solution to this problem has not yet been reached. However, it is being actively studied co-operatively by A.A.I., No.1 District, and the Allied Commission. This condition affects the power supply to Rome and other northern points."

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

17. Water Supplies. 6537

The repair of water supplies that have suffered war damage continues steadily, and a number of new schemes have been approved during the month. There is evidence of a tendency on the part of the civil authorities to propose the execution of more extensive work than would actually be sufficient to meet essential needs and, therefore, it is sometimes necessary to modify projects in order to reduce to a minimum both the financial expenditure and the consumption of restricted materials.

The water supply of Rome still receives particular technical attention and there is no doubt that it has lately shown improvement. In addition to the increased quantity of water supplied to the city it is confidently expected that it will shortly be possible to effect more frequent rationing to those high level districts that are as yet without a continuous service.

Among the more important schemes authorised during the month is some repair to the severely damaged water distribution system of Terni. Approval has been given only to so much of this work as can be put in hand at once. The remainder, which is by far the larger part, cannot be executed until l later, when debris will have been cleared and the new town plan prepared.

18. Sewerage.

Repair of damaged sewerage systems also continues.

Several schemes have been approved during the month but they are not large and there is none worthy of particular mention.

19. Bonifiche.

The importance and extent of the sub-Commission's responsibilities in connection with reclaimed lands and other varieties of "Bonifiche" increase continually. Nevertheless, this work is as yet but a small fraction of the ultimate task which will be presented when the vast and numerous reclaimed areas of the northern regions demand attention. In the "Pontine Marshes", work is well in hand for restoring gravitational drainage, and a scheme has just been approved for affording further protection to Route 7 against flooding in that locality. Endeavours are being pursued in collaboration with the Transportation Sub-Commission to locate some of the electrical machinery which was removed by the Germans from pumping stations of the Pontine Marshes area.

During the month, three schemes have been approved for restoration of "Bonifiche" works in Tuscany Region and one such scheme in Abruzzi-Marche Region.

Measures are at present under consideration for alleviating flooding of highways near Cortona and Perugia.

The potentialities of deliberate flooding in the Po valley, principally by the waters of the rivers Po and Adige, present a subject for constant study. By arrangement with H.q. A.A.I., this Sub-Commission regularly receives secret intelligence, supported by plans and aerial photographs, regarding the condition of the low-lying areas concerned.

20. Gas.

There is little to report regarding the production and distribution of town gas. The town gas supply continues its restricted service and the gas

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20. Gas.

There is little to report regarding the production and distribution of town gas. The Rome gas supply maintains its restricted service and the gas supplies of Naples, Bari, Taranto and other southern towns continue in operation without any incident or difficulty worthy of particular comment. Gas production in Sicily, however, has been suspended owing to lack of coal.

The possibility of re-commencing operation of the Florence gas works early in the new year is under investigation. The restoration of this service is particularly desired by the Fifth Army in order to minimise transportation of fuel for domestic consumption. The practicability of it is almost wholly dependent upon availability of gas coal, but the prospect of obtaining adequate supplies as soon as there exists a rail transport service to Florence is good, and, therefore, repairs to the gas works are about to be put in hand.

Declassified E.O. 12356 Section 3.3/NND No. 785019

21. Heating of Offices and Quarters.

At the request of the H.Q. Commandant, the Sub-Commission recently prepared a report on fuel requirements for the central heating and hot water systems of the H.Q. building and the ten hotels which serve as living quarters for Officers and Other Ranks, or Enlisted Men. Also, at the H.Q. Commandant's request, recommendations have been made regarding necessary repairs to the central heating system of the Headquarters building.

22. Personnel.

In para. 18 of the September report, the findings of the "Man-power Committee" were outlined, and mention was also made of the addition of three American civilian engineers (since increased to four) to the staff of this Sub-Commission. The findings of the aforesaid Committee were duly implemented, thus reducing the number of officers at Headquarters to thirteen, eight of whom comprise the permanent basic officer staff (engineering and administrative), whilst the other five are provisionally retained, as agreed, for work on the Electric Power Survey and in connection with the general work of the Electrical Division.

A.F.H.Q. Administrative Memorandum No. 49, dated 5 Oct.44, the essence of which was set out in para. 20 (b) of the September report, has greatly increased the burden of the Electrical Division, and it has done this by making the Allied Commission - and, therefore, this Sub-Commission - the "mainspring" of electric power activities in Italy. On receipt of the Memorandum, the question of providing personnel to shoulder the added duties and responsibilities was immediately to be considered and, after careful review, it was recommended that a total of 47 electrical engineer officers (10 at this Headquarters and 37 in the Regions) would be needed. This figure is inclusive of the present staff. This recommendation was to be considered by the "Man-power Committee" early in November.

Of the above estimated number of electrical engineer officers, the 10 for Headquarters are all necessary now. Of the ultimate 37 for the Regions, probably only about one third are required at present, but they will need to be supplemented from time to time, as more and more territory becomes liberated, until the ultimate figure of 37 is reached concurrently with the occupation of the whole of Italy. It is expected that considerable difficulty will be met in acquiring this number of experienced officers, with the necessary specialist qualifications, and for this reason alone it is likely to take a considerable time to reach the envisaged eventual strength.

Three of the American civilian engineers have been assigned to the staffs of Regional Engineers: Messrs. Townsend and Rapp to Southern Region and Mr. Griffith to Abruzzi-Marche Region. Mr. Solomon was appointed to duties at this Headquarters in connection with Housing. By posting these civilian engineers to Regions, it is intended that they shall gain practical experience in the problems and duties of Regional Engineers and their staffs. It is reiterated that every endeavour has been made to meet the individual wishes of these gentlemen and to find them congenial work.

The Sub-Commission was recently required to nominate three of its British officers with a view to their possible employment in another theatre of war. Shortly afterwards a further three names had to be submitted, making a total of six British officers whose services may now be expected to be lost to the Sub-Commission. This is regarded as a somewhat heavy demand upon the already very limited number of experienced British officers in the respective grades, and it will tend to make the work of the Sub-Commission still more onerous for the remainder of the staff.

In the next paragraph is a list of the officers and [illegible]

Declassified E.O. 12356 Section 3.3/NND No. 789019

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A.F.H.Q. administrative Memorandum N°. 43, dated 5 Oct.44, the essence of which was set out in para. 20 (b) of the September report, has greatly increased the burden of the Electrical Division, and it has done this by making the Allied Commission - and, therefore, this Sub-Commission - the "mainspring" of electric power activities in Italy. On receipt of the Memorandum, the question of providing personnel to shoulder the added duties and responsibilities was immediately to be considered and, after careful review, it was recommended that a total of 47 electrical engineer officers (10 at this headquarters and 37 in the Regions) would be needed. This figure is inclusive of the present staff. This recommendation was to be considered by the "Man-power Committee" early in November.

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The Sub-Commission was recently required to nominate three of its British officers with a view to their possible employment in another theatre of war. Shortly after urds a further three names had to be submitted, making a total of six British officers whose services may now be expected to be lost to the Sub-Commission. This is regarded as a somewhat heavy demand upon the already very limited number of experienced British officers in the respective grades, and it will tend to make the work of the Sub-Commission still more onerous for the remainder of the staff.

In the next paragraph is a list of the officers and Allied civilian engineers employed both at Headquarters and in the Regions. The number of officers at the Headquarters of the Sub-Commission is 19, and in the Regions 53, making a total of 72. The list includes one Colonel and eight Lieutenant-Colonels, five of whom are American and four British. The one full Colonel, who holds an appointment as Regional Engineer, was recently promoted to that rank. Col. E.J. Edwards, whose name appeared in the list in the September report, has since been posted away from the strength of the Sub-Commission. It may be noted that the anomaly mentioned in para. 18 of the September report still obtains, viz. that the Director (Am) and the Deputy Director (Br.) continue to hold the rank of Lt.Col., although one Full Colonel and six Lt.Cols. are subject to their direction.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(d) The Rome gas supply continues its restricted service, limited as it is by the quantity of available coal.

(e) The Rome water supply continues to receive particular technical attention. Repairs to the headworks of the "Acque Igroie", at Agosta and Pluvetto, have been slowed considerably by lack of transport (particularly for want of tires) and by bad weather. Three bursts in the distribution system recently occurred and were promptly dealt with.

Several water supply projects in the Region have been approved for execution, including part of a scheme for repairing the badly damaged water distribution system of Terni. Actually, 49 projects, representing a value of 39 million lire, were handled during the month, although financial approval has as yet been given only to about 6 million lire out of that total.

(f) During the month, 43 bridge repair schemes for Military Highways, were dealt with, bringing the total of such works to 177, of which 19 have been completed. Few maintenance contracts have been let for Military and State highways and the work now in hand is widely distributed over the 1,100 Km. of roads of this class throughout the Region. There are, however, difficulties on account of shortage of bitumen and stone and also lack of transport.

On roads other than Military and State highways, 72 bridge projects were approved during the month, bringing the total to 146, which includes 40 that are awaiting ministerial approval. This number does not include bridges which were financed in the Army Area, of which there are many in Viterbo, Rieti and Perugia.

(g) The Housing programme was completely obstructed by financial difficulties up to the end of September, but the situation improved slightly during October, when projects to provide 700 dwellings for 2,800 persons received approval.

Limited authority has also been obtained to carry out repairs to private houses. In Terni Province alone, 20 projects, totalling 7 million lire, have already been approved and financed under that authority. "Homeless" persons in Frosinone and Littoria Provinces aggregate 136,000, about 85% of whom could have been housed by now, had it not been for administrative and financial delays, the preparation of decrees, etc. Technical instructions for the work were, in fact, issued in July, and the subsequent deterioration of execution is open to severe criticism.

(h) Clearance of debris in the City of Rome amounted to 5,700 cu.m. in October, and the City Authorities, despite shortage of transport, succeeded in keeping the streets reasonably clean. Street repairs in the City continue rather slowly, being limited by want of bitumen and cement. There has been some progress on re-laying the worst trouglines.

(i) Repair of war-damage in the sewerage system of Rome is still incomplete, but good progress has been made.

(j) At Fiumicino Harbour (near Rome), dock repairs and the raising of sunken vessels have progressed favourably, though they have been impeded by difficulty in obtaining operating plant and divers, so much in demand for more important ports.

(k) The Regional Engineer complains of the general shortage of cement, bricks, and bitumen; the necessity of all of which in the execution of public works requires no explanation. It is not merely a local problem; it exists in every Region and is a source of complaint throughout the country.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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On roads other than Military and State highways, 72 bridge projects were approved during the month, bringing the total to 126, which includes 40 that are awaiting ministerial approval. This number does not include bridges which were financed in the Army area, of which there are many in Viterbo, Rieti and Perugia.

(g) The Housing programme is completely obstructed by financial difficulties up to the end of September, but the situation improved slightly during October, when projects to provide new dwellings for 2,800 persons received approval.

Limited authority has also been obtained to carry out repairs to private houses. In Terni Province alone, 20 projects, totalling 7 million lire, have already been approved and financed under that authority. "Restoring" projects in Frosinone and Littoria Provinces aggregate 196,000, about 25% of which could have been caused by now, had it not been for administrative and financial delays, the preparation of decrees, etc. Technical instructions for the work were, in fact, issued in July, and the subsequent deferment of execution is open to severe criticism.

(h) Clearance of debris in the City of Rome amounted to 5,700 cu.m. in October, and the City authorities, despite shortage of transport, succeeded in keeping the streets reasonably clean. Street repairs in the City continue rather slowly, being limited by want of bitumen and cement. There has been some progress on re-laying the worst tramlines.

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(k) The Regional Engineer complains of the general shortage of cement, bricks, and bitumen; the necessity of all of which in the execution of public works requires no explanation. It is not merely a local problem; it exists in every Region and is a source of complaint throughout the country.

(l) Speaking of the Genio Civile, the Regional Engineer expresses a high regard for the energy, co-operation and ability of the Ispett.ri Generali of the Compartimenti. There is, however, a pressing need for additional staff, without which the Ispettori Generali cannot be expected to carry out rapidly and successfully the extensive works on hand, amounting in value to some 350 million lire.

(m) Progress in clearance has been concentrated in areas of urgent work. These vital operations are being carried out partly by a Military unit and partly by civil contractors.

(n) Considerable headway has been made in restoring gravitational drainage in the Pontine Marshes area, and important flood control works are in hand at Terracina. The principal object of the latter is to safeguard Route 7, the uninterrupted use of which is a military necessity.

6533

Declassified E.O. 12356 Section 3.3/NND No. 785019

situation appears to be quite satisfactory. In Bari Province all restrictions on water consumption have been lifted. The Regional Engineer observes in regard to the Metaponto area that the water supply system of the average commune is inadequate and generally in a bad state of repair. He advises that a comprehensive survey should be made of the water supplies in that area, in order that repair projects may be initiated in the interests of public health. The Genio Civile has, in fact, already been requested to embark on this work.

(g) Road works in the Region have been limited to maintenance and minor repairs, which, however, have continued on an extensive scale and have made good progress despite the difficulties imposed by bad weather. Reconstruction of eight bridges was been completed during the month. Many others are in hand, and at least five new contracts have recently been let.

(h) There exists a serious shortage of stone for the construction of military highways, railways and airports. The Regional Engineer has, however, recently succeeded in establishing a working agreement with the U.S. Air Corps for pooling their joint resources and equipment with the object of increasing the overall production, and by similar co-operation, it is hoped also to reduce the cost of the stone. The great 'bottleneck' in this operation is - need it be said ? - lack of road transportation. Co-ordinated efforts are, therefore, being made to use tramways and narrow gauge railways to the utmost, wherever they can be pressed into service in lieu of transport by road.

(i) The Regional Engineer reports that the officials of the Genio Civile of Naples have been displaying an attitude of complete inanity and disinterest. This has been brought to the attention of the Ministry of Public Works. It may be remarked, with some bearing on the subject - though not by way of justification - that such officials are considered to be very poorly paid.

(j) Difficulties, in the Bari District, regarding the operation and maintenance of A.M.G. vehicles on loan for work on military highways, were mentioned in para.22 (h) of the September report. An appreciable improvement in this matter can now be reported.

20. LECCE-BRINDISI REGION (Regional Engineer: Lt.Col. O. de C.E. FINDLAY, V.C., E.D., R.E.).

(a) Two additional officers were assigned to the Regional Engineer's staff during the month, and the services of two others were made available on temporary loan. This additional assistance, which has been badly needed, was welcomed by the Regional Engineer.

(b) The Simpson of the Comune of Bari has formed a Committee for the co-ordination of technical services. The Regional Engineer speaks warmly of this and states that the initial meeting of the Committee was given promise of constructive and helpful co-operation.

(c) Electrical energy available to the Region is only a little more than

Declassified E.O. 12356 Section 3.3/NND No. 785019

of the stone. The great 'bottleneck' in this operation is - most is be said - lack of road transportation. Co-ordinated efforts are, therefore, being made to use tramways and narrow gauge railways to the utmost, wherever they can be pressed into service in lieu of transport by road.

(a) The Regional Engineer reported that the officials of the Lazio Civile of Naples have been displaying an attitude of complete laxity and disinterest. This has been brought to the attention of the Ministry of Public Works. It may be remarked, with some bearing on the subject - though not by way of justification - that such officials are considered to be very poorly paid.

(j) Difficulties, in the Bari district, regarding the operation and maintenance of M.T. vehicles on loan for work on military highways, was mentioned in para.22 (h) of the September report. An appreciable improvement in this matter can now be reported.

2(. <u>LAZIO-UMBRIA REGION</u> (Regional Engineer: Lt.Col. G. de Cab. FINDLAY, V.C., M.C., R.E.).

(a) Two additional officers were assigned to the Regional Engineer's staff during the month, and the services of two others were made available on temporary loan. This additional assistance, which has been badly needed, was welcomed by the Regional Engineer.

(b) The Minister of the Comune of Rome has formed a Committee for the co-ordination of technical services. The Regional Engineer speaks warmly of this and states that the initial meeting of the Committee has given promise of constructive and helpful co-operation.

(c) Electrical energy available to the Region is only a little more than 10% of the pre-war demand. Even this fact, the difficult electrical situation, especially in the City of Rome, can well be understood. Rationing of electricity in the Rome Area has already been discussed in para.12, and the difficulties are well illustrated by the following colourful words of the Regional Engineer. He says:-

> "The main competitors for energy, some vociferous, are those who want lifts instead of trams and others who want trams instead of lifts, and always the domestic consumers who want continuous light, and the industrial user who claims priority over both".

As to the electrical situation in the Region as a whole, it can be said that it slowly improves as work goes on. There has been an increase of about 6,000 KW. in available power, and about 30% of the transmission lines are now in operation.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(iv) Repair to the Tuscania-Calvi-Terventa 60 .. transmission line should be finished very early in November.

(v) Rehabilitation of the Sub-Stations of Pietrarsa and Frattamaggiore - partly by cannibalisation - is well in hand.

Reference has already been made herein to the estimates submitted by the 'Societa' Meridionale di Elettricita' ' for financing the repair of war damage suffered by its installations. These estimates amount to more than two hundred million lire, and further similar estimates are expected, from other Undertakings.

In Naples Province 249 applications for electric power (excluding requests for electric light) were received during the month. 61 of these were recommended, 115 rejected and 54 deferred.

A meeting was held with the managers of all electric power Undertakings in Southern Italy with the object of achieving co-ordination in solving the general problem of power distribution and transmission line restoration. Incidentally, this meeting brought out very clearly the magnitude of the Italian Government's "incurred indebtedness", towards the liquidation of which no payments have yet been made. Various technical problems were discussed and it was decided henceforward to hold similar meetings at monthly intervals.

With ever greater vigour than before, the Regional Engineer has reiterated his complaint about the serious lack of materials and road transport so vitally needed by the Societa' Meridionale di Elettricita', both for maintaining the operation of its system and for progressing in the repair of its installations. The demand for electricity increases daily, and the Regional Engineer points out that this Utility Undertaking will soon find itself unable to meet the demand, unless something can be done at once to provide transport and materials.

Naples recently suffered a 24-hour interruption in its electricity supply due to the damaging of transmission lines by storms, but if the electricity Undertaking had had trucks at its disposal the service could have been restored in one quarter of that time.

(d) The above-mentioned shortage of materials and transport, which promises soon to bring progress to a halt, is not a local condition, nor is it confined to electrical needs. Far from being peculiar to Naples, it exists with equal seriousness in the Bari and Catanzaro zones. Indeed, it is well known to be the general complaint of AC-A.C Officers everywhere. "Requisitions, AC/A.C.10 Forms and letters", says the Regional Engineer, "have gone forward through channels; but to date the situation remains the same....., using A.C./20[illegible] for supplies is entirely unsuccessful." The following is a further verbatim quotation from his earnest observations on this subject:-

> "Actually, except for a few remote cases, all materials procured by this Section have been through Military Units in this area.
> It is the opinion of this Section that control of materials in this area should be decentralized. It has been our experience that many Army Units are ready to exercise control on present stocks but few are prone to increase these stocks for the civilian and military demands. Paradoxically, Army requirements from this Section increase rather than decrease."

(e) Gas production in Naples continues to increase, and repair of the gas works is progressing favourably. Another storage tank for integral gas has

Declassified E.O. 12356 Section 3.3/NND No. 785019

this meeting brought out very clearly the magnitude of the Italian Government's 'incurred indebtedness', towards the liquidation of which no payments have yet been made. Various technical problems were discussed and it was decided henceforward to hold similar meetings at monthly intervals.

With ever greater vigour than before, the Regional Engineer has reiterated his complaint about the serious lack of materials and road transport so vitally needed by the Societa' Meridionale di Elettricita', both for maintaining the operation of its system and for progressing in the repair of its installations. The demand for electricity increases daily, and the Regional Engineer points out that this Utility Undertaking will soon find itself unable to meet the demand, unless something can be done at once to provide transport and materials.

Naples recently suffered a 24-hour interruption in its electricity supply due to the damaging of transmission lines by storms, but if the Electricity Undertaking had had trucks at its disposal the service could have been restored in one quarter of that time.

(d) The above-mentioned shortage of materials and transport, which promises soon to bring progress to a halt, is not a local condition, nor is it confined to electrical needs. Far from being peculiar to Naples, it exists with equal seriousness in the Bari and Catanzaro zones. Indeed, it is well known to be the general complaint of AC-AC officers everywhere. "Requisitions, AC/AAI.10 Forms and letters", says the Regional Engineer, "have gone forward through channels; but to date the situation remains the same..... using mail/10" for supplies is entirely unsuccessful." The following is a further verbatim quotation from his current observations on this subject:-

> "Actually, except for a few remote cases, all materials procured by this Section have been through Military Units in this area.
> It is the opinion of this Section that control of materials in this area should be decentralized. It has been our experience that many Army Units are ready to exercise control on present stocks but few are prone to increase those stocks for the civilian and military demands. Paradoxically, every requirements from this Section increases rather than decreases."

(e) Gas production in Naples continues to increase, and repair of the gas works is progressing favourably. Another storage tank for integral gas has been put into commission, and the repair of other tanks and the main battery for distillation is well in hand. Good progress has also been made in rehabilitating the gas distribution system of Naples, pipe lines in four more streets having been restored to use (thus greatly improving the pressure throughout the districts of Salvatore Rosa, San Lorenzo and San Potito) and work continues on restoration of the main pipe line in Via Galileo Ferraris.

Gas production in Bari, Taranto and other towns remains normal, though in Bari difficulty has been experienced in obtaining suitable gas coal.

(f) For the Naples water supply, urgent repairs are being carried out on the aqueduct at Torrente di Faravegna and on the Serino reservoir. Repair of the Chiaiano reservoir has been completed and the reservoir is now in service. Numerous repairs to the water distribution system have been carried out in various parts of the city.

Elsewhere in the Region, excepting the Cerignola district, the water supply

6536

Declassified E.O. 12356 Section 3.3/NND No. 785049

Description:	Number of projects:	Total estimated cost (millions of Lire):
Public buildings, etc.	69	25.0
Harbours, lighthouses, etc.	19	4.2
Roads and sewers	23	17.1
Bridges	10	9.5
Water supplies	5	2.8
"Bonifiche"	3	8.2
Various other works	11	8.1
Totals.	137	73 million Lire.

The total of expenditure and commitments incurred during the month on all classes of work amounts to approximately 55 million Lire.

(f) The Regional Engineer - in common with Engineers of other Regions - complains of shortage of transport and materials, laying particular stress upon the lack of transport. It appears that materials would be available from local sources, if only they could be transported.

25. SOUTHERN REGION (Regional Engineer: Col. L.J. HENSELL, C.B.E.)

(a) Numerous requests for constructional works and repairs have recently been submitted to the Regional Engineer by the Royal Navy, Peninsular Base Section, No. 3 District, U.S. Army Air Force, certain Sub-Commissions of A.C., and by various Town Majors. Military necessity rendered most of these requests extremely urgent, and it is unfortunate that the Regional Engineer should have had cause to complain of the extreme difficulty he is experiencing in obtaining explosives and other stores essential to the execution of some of these most pressing projects. Another factor hindering some of the work is the continued need of mine clearance.

(b) Major Knight and Captain Lamble, who were engineer officers respectively in Bari and Foggia, have both been re-assigned to other Regions. Captain Lamble will be replaced by Captain Brown, and Maj. Knight will be replaced by Maj. Chamberlin, now at Catanzaro, who in turn will be replaced by Mr. Rapp, American civilian Engineer.

Mr. Townsend, an American civilian engineer, has been assigned to the Regional Engineer's staff, and has been allotted duties in connection with materials and transport.

(c) The electricity supply situation in Southern Region has suffered some temporary deterioration as a result of the failure, on 29 Oct, of three generating units in the Orichella Station of the Sila power plants, depriving the system of 55,000 KW. generating capacity. It is hoped that one of the three units will be restored to operation in a few days, but repair of the other two is

Declassified E.O. 12356 Section 3.3/NND No. 785019

(p) The Regional Engineer - in common with practically all other Regions - is complaining of shortage of transport and materials, laying particular stress upon the lack of transport. It appears that materials would be available from local sources if only they could be transported.

25. SOUTHERN REGION (Regional Engineer: Col. L.J. HEWLETT, C.B.E.)

(a) Numerous requests for reconstructional works and repairs have recently been submitted to the Regional Engineer by the Royal Navy, Peninsular Base Section, No. 3 District, U.S. Army Air Force, certain Sub-Commissions of A.C., and by various Town Majors. Military necessity rendered most of these requests extremely urgent, and it is unfortunate that the Regional Engineer should have had cause to complain of the extreme difficulty he is experiencing in obtaining explosives and other stores essential to the execution of some of these most pressing projects. Another factor hindering some of the work is the continued need of mine clearance.

(b) Major Knight and Captain Dobbie, who were engineer officers respectively in Bari and Foggia, have both been re-mustered to other Regions. Captain Dobbie will be replaced by Captain Brown, and Maj. Knight will be replaced by Maj. Chamberlin, now at Catanzaro, who in turn will be replaced by Mr. Hopp, American civilian Engineer.

Mr. Townsend, an American civilian engineer, has been assigned to the Regional Engineer's staff, and has been allotted duties in connection with materials and transport.

(c) The electricity supply situation in Southern Region has suffered some temporary deterioration as a result of the failure, on 29 Oct, of three generating units in the Orichella Station of the Sila power plants, depriving the system of 55,000 KW. generating capacity. It is hoped that one of the three units will be restored to operation in a few days, but repair of the other two is bound to take a long time and the inevitable delay is likely to be aggravated by transportation difficulties.

Electrical Rehabilitation Projects:-

(i) The Calore hydro-electric plant has been reconstructed and is now under test. It is hoped that it will be carrying a load of 5,500 KW. by December.

(ii) Reconstruction of the Isto hydro-electric plant has suffered delay owing to lack of transport and cement. This plant will have an output capacity of 6,500 KW.

(iii) Repair of the Lauro Lucaro hydro-electric plant is expected to be finished in November. This plant will then supply 2,000 KW.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED COMMISSION
AFO 394
Public Works and Utilities Sub-Commission

TYPE OF PROJECT	PROCEDURE Italian Government Territory	PROCEDURE U.S.C. Territ
1. Military - all types, regardless of cost or materials required.	Approved by Reg. Engr. Submitted thru ACC. channels to Hq. for final approval.	Approved by Reg. Engr. to Hq. for final appr
2. Civilian - Up to 500,000. (A) No critical materials (B) Requiring critical materials	(A) Approved by Comp'timenti Italian Engineers only. List submitted to Reg. Engr. by 25th of subsequent month for attachment to montnl. report. (B) Approved by Reg.Engr. - submitted thru Italian channels to Hq. for final approval.	Approved by Reg. Engr. report by Reg. Engr. month. (B) Approved by Reg. channels to Hq. for
3. Civilian - 500,000 to 1,000,000 (A) No critical materials (B) Requiring critical materials	(A) Approved by Reg.Engr. forwarded by Italian Govt. to the Minister for final approval. List attached to monthly report by Reg.Engr. showing approvals for previous month. (B) Approved by Reg.Engr. Submitted thru Italian channels to Hq. for final approval.	(A) Approved by Reg. report by Reg.Engr. month. (B) Approved by Reg. channels for final
4. Civilian-Over 1,000,000 with or without critical materials.	Approved by Reg.Engr. Submitted thru Italian channels to Hq. for final approval.	Approved by Reg. En channels to HQ. for

Exceptions to above:

Bridges: All plans for structures with span in excess of 10 feet require the approval of Hq.

(A) On projects not requiring financial approval of Hq., 2 copies of plan and 1 copy of estimate shall be submitted channels. One copy of plan will be returned to Regional Engineer bearing stamp of approval.

(B) On projects requiring financial approval by Hq., 2 copies of plan and 1 copy of estimate shall be submitted thru channels as outlined above. One copy of plan will be returned to Regional Engineer together with approval

NOTE: This supersedes all previous instructions with reference to routing of project approval documents.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED COMMISSION
A.P.O. 794
Public Works and Utilities Sub-Commission

	PROCEDURE Italian Government Territory	PROCEDURE A.M.G. Territory
	Approved by Reg. Engr. Submitted thru AG. channels to HQ. for final approval.	Approved by Reg.Engr. submitted thru AG. channels to HQ. for final approval.
	(a) Approved by Constituent Italian Engineers offs. List submitted to Reg. Engr. by 25th of subsequent month for attachment to monthly report. (b) Approved by Reg.Engr. - Submitted thru Italian channels to HQ. for final approval.	Approval by Reg. Engr. List attached to monthly report by Reg. Engr. showing approvals for previous month. (c) Approved by Reg.Engr. Submitted thru AG. channels to HQ. for final approval.
	(a) Approved by Reg.Engr. Forwarded by Italian Engrs. to the Director for final approval. List attached to monthly report by Reg.Engr. showing approvals for previous month. (c) Approved by Reg.Engr. Submitted thru Italian channels to HQ. for final approval.	(d) Approved by Reg.Engr. List attached to monthly report by Reg.Engr. showing approvals for previous month. (E) Approved by Reg.Engr. Submitted thru AG. channels for final approval.
	Approved by Reg.Engr. Submitted thru Italian channels to HQ. for final approval.	Approved by Reg. Engr. - Submitted thru AG. channels to HQ. for final approval.

6536

with plan in excess of 10 feet require the approval of HQ.
cial approval of HQ., 2 copies of plan and 1 copy of estimate shall be submitted direct to HQ. thru AG.,
e returned to Regional Engineer bearing stamp of approval.

l approval by HQ., 2 copies of plan and 1 copy of estimate shall be submitted with financial documents
One copy of plan will be returned to Regional Engineer together with approved form AG/1.

n instructions with reference to routing of project approval documents.

REGIONAL REPORTS

2. SICILIA REGION (Regional Engineer: Major L.A. COLD, R.E.)

(a) Work of reconstruction in the cities and on the roads continues. Nothing spectacular is being done but steady progress is being maintained.

(b) The Regional Engineer is the only officer of the F.A.A.O. Sub-Commission left on the island.

(c) Capt. A.E. Preedy, R.A., of the F.A.A.O. Sub-Commission, visited this Region in October. He and the Regional Engineer made two tours of inspection during his visit.

(d) The first tour was made in the provinces of Agrigento and Caltanisetta where a number of bridges on the main Southern route (S.S. 115), from Syracuse to Trapani, were seen. As this road is not considered a military highway, these projects have been somewhat delayed, but their progress has been more satisfactory of late and there is no reason why they should not be finished before the rainy season.

(e) It is now possible to use the Cajodurso bridge on S.S. 122. This was a monumental bridge, constructed in the seventeenth century. An excellent job has been done in reconstructing it.

(f) The trip to Messina was made by road over S.S. 113. This highway during the Summer months was a veritable engineering site. In a length of 100 Km. there were 60 interruptions, including 30 demolished bridges. All works on this highway that are not yet completed are in an advanced stage.

(g) At Messina several works in progress were visited, including jobs in the port, for the U.N.R.R.A., and repairs to public buildings in the city. Locks and furniture for doors, and hardware for windows, were being made on the site, and boys were employed in making nails. The Reich has never received any material or transport from the mainland and therefore all work carried out there has been done with local resources.

(h) Capt. Preedy and the Regional Engineer visited the new Prefect of Messina Province, who stressed the need for continuation of the Public Works programme in Messina as a means of assisting in the solution of the employment problem.

(i) At Catania various problems in public works were discussed with the Engineers of the Genio Civile.

(j) During October 16 estimates for work of ordinary maintenance on military highways were dealt with.

Roads generally are deteriorating somewhat in Sicily on account of the coal shortage. Asphalt and asphalt products cannot be transported from the Augusta mines because the railways are rationed for fuel, and steam rolling cannot be done because contractors are unable to obtain coal for the rollers.

(k) The Regional Engineer has furnished detailed statistics, as usual, regarding the electrical situation, showing that the island continues to be in a fortunate position compared with the mainland of Italy.

Declassified E.O. 12356 Section 3.3/NND No. 785019

season.

(e) It is now possible to use the Catenanuova bridge on S.S. 122. This was a monumental bridge, constructed in the seventeenth century. An excellent job has been done in reconstructing it.

(f) The trip to Messina was made by road over S.S. 113. This highway during the Summer months was a veritable engineering site. In a length of 200 Km. there were 20 interruptions, including 30 demolished bridges. All works on this highway that are not yet completed are in an advanced stage.

(g) At Messina several works in progress were visited, including jobs in the port, for the N.G.I.C., and repairs to public buildings in the city. Locks and furniture for doors, and hardware for windows, were being made on the site, and boys were employed in making nails. The Region has never received any material or transport from the mainland and therefore all work carried out there has been done with local resources.

(h) Capt. Creed and the Regional Engineer visited the new Prefect of Messina Province, who stressed the need for continuation of the public works program in Messina as a means of assisting in the solution of the employment problem.

(i) At Catania various problems in public works were discussed with the Engineers of the Genio Civile.

(j) During October, 16 estimates for work of ordinary maintenance on military highways were dealt with.

Roads generally are deteriorating somewhat in Sicily on account of the coal shortage. Asphalt and asphalt products cannot be transported from the Regusa mines because the railways are rationed for fuel, and steam rolling cannot be done because contractors are unable to obtain coal for the rollers.

(k) The Regional Engineer has furnished detailed statistics, as usual, regarding the electrical situation, showing that the island continues to be in a fortunate position compared with the mainland of Italy. Minor and Major repairs continue at several power stations.

(l) With the advent of the rainy season there remains no difficulty in the matter of water supplies.

(m) Owing to shortage of coal no gas is being produced in Sicily.

(n) Tramways continue to function satisfactorily in Palermo, Catania and Trapani.

(o) During the month the following projects have been dealt with:

Continued on page 17.

Declassified E.O. 12356 Section 3.3/NND No. 789019

Cont'd Abruzzi-Marche Region

Major J.E. Foden	(B) Elect. Util. Officer
Mr. F.O. Griffith	(A) Asst. Engr. Staff.

Sardegna Region

Now under Italian Control

Toscana Region

Major T.B.L. Lee	(B) Regional Engineer Officer
Lieut. L.J. Hodges	(B) Public Works Officer
Capt. T.R. Brownlee	(A) Highways
Capt. T.H.C. Stephens	(B) Elect. Util. Officer
Capt. J.R. Perkins	(B) Public Works Officer
Capt. H.J. Rosack	(A) Elect. Util. Officer
Major G. Bouchet	(B) Liaison Officer No. 1 Dist.

Emilia Region

Major W.L. Spann	(A) Regional Engineer Officer
Major W.H. Gamble	(B) Public Works Officer
Capt. R.F. Wester	(A) Attché A.A.G. 5th Army
Capt. E.H. Rogers	(A) Elect. Util. Officer

Piedmonte Region

Lt.Col. C.H. Bissonett	(A) Regional Engineer Officer
Major C.F. Buckley	(B) Public Works Officer
Capt. J.A. Robb Jr.	(A) Public Works Officer
Capt. E.E. Smith	(A) T.W.O. (Liguria Region)
Major G.C. Eberle	(A) Highways Officer
Major F.S. Bunnet	(B) Elect. Util. Officer

Lombardia Region

Lt. Col. C.P. Balick	(A) Regional Engineer Officer
Major E.H. Richardson	(A) Public Works Officer
Major A. Crowther	(B) Atchd. A.A.G. 5th Army
Major G. Larson	(A) Public Works Officer

Veneziy Region

Major E. Knight, A.C.	(B) Regional Engineer Officer
Capt. E.B. Feldman	(A) Public Works Officer
Major A.G. Perley	(B) Highways
Capt. J.S.C. Wilson-Hosthote	(A) Highways
Major M.O. Wooster	(A) Elect. Util. Officer.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Ligurian Region

Major W.A. Spann — (A) Regional Engineer Officer
Major W.H. Gamble — (B) Public Works Officer
Capt. R.F. Wester — (A) Attchd A.A.G. 5th Army
Capt. T.C. Jeeves — (A) Elect. Util. Officer

Piedmont Region

Lt.Col. C.H. Hirtzett — (A) Regional Engineer Officer
Major G.I. Buckley — (B) Public Works Officer
Capt. J.M. Robb Jr. — (A) Public Works Officer
Capt. E.E. Smith — (A) A.A.G. (Liguria Region)
Major C.C. Eberle — (A) Highways Officer
Major J.S. Burnet — (B) Elect. Util. Officer

Lombardia Region

Lt. Col. C.F. Bolick — (A) Regional Engineer Officer
Major E.M. Richardson — (A) Public Works Officer
Major A. Gauthier — (B) Attchd. A.A.G. 5th Army
Major R. Larson — (A) Public Works Officer

Venezia Region

Major B. Knight, A.C. — (B) Regional Engineer Officer
Capt. S.B. Feldman — (A) Public Works Officer
Major A.G. Perley — (B) Highways
Capt. J.B.C. Wilson-Westhote — (B) Highways
Major M.O. Wooster — (A) Elect. Util. Officer.

Declassified E.O. 12356 Section 3.3/NND No. 784019

NOMINAL ROLL OF OFFICERS

(A) At Headquarters :

Lt. Col. L.A. Berry	(A) Director Sub-Commission
Lt. Col. G.L. Rhodes	(B) Deputy Director
Capt. A.E. Freedy	(B) Admin. Officer
Sub. K.A. King	(B) Asst. Adm. Officer

Public Works Division

Lt. Col. V.S. Thompson	(B) Chief, Public Works Div.
Capt. R.W. Shepherd	(A) Asst. to Chief P.W. Div.
Major N.B. Hyland	(A) P.W.O. South
Mr. D. Solomon	(A) Housing.

Electrical Div.

Lt. Col. W.L. Lapper	(B) Chief Electrical Div.
Capt. L.W. Loughlin	(A) Asst. to Chief Elect. Div.
Major E.L. Barry	(A) Electrical Generation Dept.
Major V.C. Benton	(A) Operations & Transm. Dept.
Major L.A. Bell	(A) Elect. Util. Officer
Major H.W. Westwood	(B) Water, Gas & Drainage
Major L.C. Price	(C) Supply Officer (stores)
Capt. S.E. Trumpershauser	(A) Elect. Util. Officer
Capt. P.M. Varney	(A) Elect. Util. Officer
Capt. H.G. Best	(B) Elect. Util. Officer
Capt. A.E. Duran	(A) Elect. Util. Officer

(B) In Regions :

Sicilia Region

Major D.A. Boyd	(A) Regional Engineer Officer

Southern Region

Col. L.J. Hensley	(A) Regional Engineer Officer
Major W.E. Chamberlin	(A) P.W.O. Liaison Officer No. 2 Dist.
Capt. L.N.J. Hibbard	(B) Liaison Officer No. 3 Dist.
Capt. A.O.A. Soul	(A) Highways
Capt. L.E. Brown	(A) Highways
Capt. P.A. Ryan	(A) Elect. Util. Officer
Lieut. F.H.H. Stephens	(B) Highways
1st Lieut. F.A. Strollo	(A) Elect. Util. Officer
Mr. R.H. Townsend	(A) Reg. Engr. Staff.
Mr. C. Repp	(A) Reg. Engr. Staff.

Italo-Charis Region

Lt. Col. G.de C.E. Pirdlay, V.C.	(B) Regional Engineer Officer
Major [illegible]	(B) Public Works Officer

Declassified E.O. 12356 Section 3.3/NND No. 785049

Lt. Col. W.H. Napier	(E) Asst. to Chief Elect. Eng.
Capt. L.W. Laughlin	(A) Electrical Generation Dept.
Major E.L. Berry	(A) Operations & Transm. Dept.
Major V.S. Benton	(A) Elect. Util. Officer
Major E.G. Bell	(E) Water, Gas & Drainage
Major H.W. Westwood	(E) Supply Officer (attchd)
Major I.B. Price	(A) Elect. Util. Officer
Capt. W.E. Brunnershausen	(A) Elect. Util. Officer
Capt. P.M. Vantol	(E) Elect. Util. Officer
Capt. H.G. Best	(A) Elect. Util. Officer
Capt. A.B. Duran	

(E) Inspections :

Sicilia Region

Major D.J. Boyd	(E) Regional Engineer Officer

Southern Region

Col. R.J. Hensley	(A) Regional Engineer Officer
Major W.E. Chamberlin	(A) P.W.O. Liaison Officer No. 2 Dist.
Capt. H.N.J. Hibbard	(E) Liaison Officer No. 3 Dist.
Capt. A.B.M. Saul	(E) Highways
Capt. E.L. Brown	(A) Highways
Capt. P.A. Ryan	(A) Elect. Util. Officer
Lieut. P.M.H. Stephens	(E) Highways
1st Lieut. P.A. Strollo	(A) Elect. Util. Officer
Mr. H.H. Townsend	(A) Reg. Engr. Staff.
Mr. C. Rapp	(A) Reg. Engr. Staff.

Lazio-Umbria Region

Lt. Col. G.de C.E. Firdlay, V.C.	(E) Regional Engineer Officer
Major A.C. Evans	(E) Public Works Officer
Major A.E. Michael	(A) Public Works Officer
Capt. W.P. Laughton	(A) Public Works Officer
Capt. N.A. Whitter	(A) Public Works Officer
Capt. W.H. Gentry	(A) Highways
Capt. T.P. Spriggs	(A) Highways
Capt. A.J. Greene	(E) Highways
Lieut. E.F. Wade-Brown	(E) Elect. Util. Officer
Lieut. J.W.L. Butcher	(E) Elect. Util. Officer
Secd. Lt. P.F. Natale	(A) Public Works Officer

Abruzzi-Marche Region

Lt. Col. Latimer	(A) Regional Engineer Officer
Major J.C. Rively	(A) Public Works Officer
Capt. J.H. Walen	(A) Highways

Declassified E.O. 12356 Section 3.3/NND No. 78 5019

27. ABRUZZI-MARCHE REGION (Regional Engineer: Lt.Col. C.A. LAIDLER, C.E.)

(a) Pesaro, Urbino and Ancona are still under control of Eighth Army. The Compartimento of Abruzzi, which comprises the Provinces of Pescara, Chieti, Teramo and Aquila, was returned to the Italian Administration on 16th October.

The forward office which the Regional Engineer set up at Ancona in September, in order to facilitate liaison with Eighth Army Engineers and Eighth Army A.A.G., has proved its worth.

(b) Problems in Ancona have been aggravated by the refusal of the provincial authorities to co-operate in an endeavour to find the Genio Civile officials and bring them back into the town. These engineers are at present dispersed in neighbouring villages. Their dispersal, combined with want of transport and communication facilities, obviously precludes efficient working.

In Pesaro-Urbino there is still much confusion and as yet there is no "Capo" of Genio Civile in the Province. The Ancona official was asked to act provisionally in this capacity when A.A.G. assumed control of the area, but this arrangement has not been satisfactory for many reasons; principally because there is more work than he can properly handle in Ancona, added to which the difficulties of communication and transport make it impossible for him to keep in touch with the whole area. Speaking of Pesaro, the Regional Engineer says: "All bridges are destroyed and communication is impossible in most of the Province." "Pesaro is still in the emergency stage....". The provision of a "Capo" of Genio Civile was, of course, urgently requested, and it is expected that he will have arrived and taken up his duties by an early date in November.

(c) In addition to the Allied officer personnel listed in para. 23, an Italian officer - Maj. Marcello of the Genio R.A. - who is attached to the A.C., has been assigned to the Region and has been sent to assist the Regional Engineer's forward staff.

(d) Further to what was said in sub-para. (b) above, the Regional Engineer has also reported several other difficulties regarding officials - or lack of officials - of the Genio Civile. Details need not be quoted here, but it should be noted that such personnel difficulties are very real. Absence of office and living accommodation for Genio Civile officials is in many cases a serious obstacle.

(e) An "overlay" map, showing revised priorities of military highways in No.1 District has been received, but there has been no alteration of the priorities in No.3 District (Previously No.2 District).

Progress of works on military highways has been maintained, and the recent rains have shown up the weak spots. Removal of Bailey bridges for transfer to the forward area has at times made things difficult, though this is by no means an extraordinary problem. Contracts for permanent reconstruction of several bridges have been let, and projects for others are in preparation.

On Route 16 , the bridges over the S. Biagio have been completed. The diversion over the Pescadero and Acquaviva rivers has also been completed and contracts have been approved for reconstructing the bridges at these points. Between Aquila, Antrodoco and Popoli, on Route 17, contractors are at work on two bridges and also on culverts and retaining walls . In Macerata Province, bridges over the Acquabona, the Asola and the Fosso a Mare were half constructed, in such a way as to pass traffic at the earliest moment, and are now being completed. Diversions to support Bailey bridges are being built on the Chienti

Declassified E.O. 12356 Section 3.3/NND No. 784019

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(c) In addition to the Allied officer personnel listed in para. 23, an Italian officer - Maj. Martella of the Genio R.A. - who is attached to the A.C., has been assigned to the Region and has been sent to assist the Regional Engineer's forward staff.

(d) Further to what was said in sub-para. (b) above, the Regional Engineer has also reported several other difficulties regarding officials - or lack of officials - of the Genio Civile. Details need not be quoted here, but it should be noted that such personnel difficulties are very real. Absence of office and living accommodation for Genio Civile officials is in some cases a serious obstacle.

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On Route 16, the bridges over the S. Biagio have been completed. The diversion over the Brancozzo and Acquacalera rivers has also been completed and contracts have been approved for reconstructing the bridges at these points. Between Aquila, Antrodoco and Rieti, on Route 17, contractors are at work on two bridges and also on culverts and retaining walls. In Macerata Province, bridges over the Acquabona, the Asola and the Fosso a More were half constructed, in such a way as to pass traffic at the earliest moment, and are now being completed. Revetments to support Bailey bridges are being built on the Chienti and Potenza rivers.

Of eleven bridges under construction on Route 16 in Ancona and Pesaro Provinces, ten should be finished very early in November. All of these were financed by the Army.

The Regional Engineer has reported in detail on numerous works in progress on other highways, but a brief summary must suffice here. The operations are extensive but they are, nevertheless, progressing well. State roads are being opened up as their need is shown, and Provincial roads are receiving attention in relation to their importance. Numerous bridges and temporary diversions are under construction, and seven of the latter have been completed.

There is a general insufficiency of road transport for these works, especially in Macerata.

It is worthy of note that in Ancona and Pesaro the enemy carried out demolitions with an exceptional thoroughness, seldom equalled in the more southerly regions. In addition to works of essentially military necessity, numerous other bridge repairs and diversions are, therefore, having to be hastened in order to restore communications essential to A.M.G. administration and supplies.

L333

Declassified E.O. 12356 Section 3.3/NND No. 785019

(f) Sanction of the Naval authorities has been obtained to a project for removing several sunken vessels from the mouth of the Misa river in order to prevent flooding of the town of Senigallia. The scheme is under preparation and the contract is expected to be let shortly.

(g) No serious difficulties in water supply have been encountered during the month. Schemes have been sanctioned for repairs to the supplies of Pescara, Novelli, Castelvecchio-Subequo and Capestrano, and for the construction of a reservoir for Francaville a Mare.

(h) A project for repairing the sewers of Pescara has been approved and other drainage schemes are in course of preparation. Urgent work has also been approved and put in hand for restoring the artificial drainage of the Fucino Lake bed, near Avezzano, essential to the maintenance of 14,000 hectares of highly productive agricultural land.

(i) A number of projects for rebuilding government offices, schools, barracks, etc., have been approved, the largest being for the reconstruction of Avezzano prison at an estimated cost of 2,400,000 lire.

(j) For their supplies of electricity, Chieti and Pescara are still dependent upon the Farindola power station and a diesel-driven plant in Pescara itself, but repairs to the 60 KV. transmission line from Bolgnano to Pescara are nearing completion, and power from the south should thus become available early in November.

In Aquila Province the electricity available from hydro-electric sources has increased with the effect of the rains.

Since 1 Oct Aquila has been able to take its power from the Bolgnano station, thus enabling Avezzano to draw its energy from Rieti again.

Ascoli-Piceno and Teramo share with Aquila the output of the Bolgnano and Cordesca generating stations.

The municipally owned power stations of Macerata Province, although damaged, have been sufficiently restored to furnish an almost normal service.

The electrical installations in Ancona Province suffered heavy damage. The situation there is being controlled jointly by the Army and A.M.G. engineers, in collaboration with the supply companies.

Pesaro Province is almost entirely without electric power.

(k) The Regional Engineer complains strongly of shortage of materials - especially cement and bitumen - and of the inadequacy of transport. He has much to say on this bitter subject, but to quote his remarks would merely be to echo the plaints of other Regional Engineers, already reported herein.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(j) For their supplies of electricity, Celsti and Pescara are still dependent upon the Peridoria power station and a diesel-driver plant in Pescara itself, but repairs to the 60 KV. transmission line from Langlere to Pescara are nearing completion, and power from the south should thus become available early in November.

In Aquila Province the electricity available from hydro-electric sources has increased with the effect of the rains.

Since 1 Oct Aquila has been able to take its power from the Bolognola station, thus enabling Avezzano to draw its energy from Ricti again.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

28. SARDEGNA REGION (Mr Regional Engineer)

(a) Clearance of debris in Cagliari City is now reported to be 81 % complete. 7,720 cu.m. of material having been removed during the month at a cost of about 1,200,000 lire.

Repair of public buildings has continued, particular attention having been given to the schools in view of their intended re-opening on or about 6th November.

(b) A program has been prepared for repair of such private buildings as can be expeditiously rendered habitable, in order to accomodate homeless families as soon as possible. These repairs are intended to be finished by 31st December next. The estimated cost of carrying out the program is a little over 100 million lire, of which 80 million applies to the town of Cagliari.

(c) Gas is now being produced in Cagliari, but its distribution is restricted to about one fifth of the City area and cannot be extended until greater supplies of fuel become available.

(d) Rehabilitation of the electricity distribution network in Cagliari has continued, and the public illumination, mentioned in the September report, has since been extended to other streets.

(e) The water supply situation in Cagliari, which has been serious for some months past, has been improved somewhat by the recent rains. The strict rationing system that is in force cannot, however, be relaxed.

(f) Rehabilitation of certain power stations, harbour works, highways, bridges, and other sundry items is reported as having made steady progress, but none of these is deserving of special comment.

(g) The Provveditore (by whom the October report on the Region was submitted) has again discussed in some detail the works which are being pursued as part of the Island's fight against malaria. More than 11 million lire has been spent on such works during October and a further program, valued at 92 million lire, has been drawn up for other urgent work. These measures will also result in restoration of damaged land-drainage systems and consequent betterment of agriculture.

(h) The Provveditore has again spoken of the lack of transport and building materials. This, as has been said before, is a great and widespread handicap, and the Provveditore's voice is but another in the general chorus of complaint.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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6532

Declassified E.O. 12356 Section 3.3/NND No. 785019

29. TOSCANA REGION (Regional Engineer: Major P.S.L. LEE, R.E.)

(a) Activities in this Region during the past month were further extended with the taking over of more territory from Fifth Army.

(b) The Regional Engineer's office, which was moved from Siena to Florence in September, is now fully organised and a number of Italian engineers have been engaged to render assistance in each branch of the department. The office is situated in the same building as that of the General Inspector (Tuscany) of the Ministry of Public Works, with whom the Regional Engineer is thus able to keep in close touch.

(c) In connection with the Regional electric power situation two conferences were held, at which were represented Fifth Army, No.1 District, Peninsular Base Section, A.A.I., A.M.G. and the Selt-Valdarno Electric power undertaking. The principal purpose of these conferences was to determine the order of priority for reconstruction of power transmission lines. The Regional Engineer was requested to assume responsibility for rehabilitating two lines of major importance, viz. the 12½ KV. line, Pian della Rocca - San Romano - Tavarnuzze, and a similar line (from State Railway), Tavarnuzze - Rifreddi.

Rehabilitation of the generating plant at Selvena is held up for want of certain parts ordered from Rome by the Societa Romana di Elettricita.

A small privately owned hydro-electric station in the vicinity of S. Marcello was found undamaged. Two units, each of 450 KVA capacity, are now in operation at this station, and a third unit of 900 KVA., which requires some repair, will shortly be in service. This station now supplies the S. Marcello district and also furnishes about 900 KVA. to Pistoia for water pumping and other essential services. It is hoped, when the 900 KVA. unit has been repaired, to activate certain important services in Prato. The transmission lines that will be needed for this are also under repair.

A meeting was held in Florence to establish a program for activating oil-presses in Florence Province. Similar action has been arranged for Siena Province, where the Supply Officer and the E.and M.Officer of 64 C.R.R. are co-operating to organise distribution of the power derived from the small hydro-electric stations on the Arno River, north of Arezzo. A complete survey of oil-presses in the Provinces of Siena and Grosseto has been carried out and arrangements are being made to put into operation as many as possible of these installations.

Constant liaison is being maintained with officers of the Industry and Commerce Sub-Commissions to ensure that everything possible is being done to rehabilitate industrial installations wherever the necessary power is available.

Declassified E.O. 12356 Section 3.3/NND No. 785019

District, Pennabilli [illegible]
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Constant liaison is being maintained with officers of the Industry and Commerce Sub-Commissions to ensure that everything possible is being done to rehabilitate industrial installations wherever the necessary power is available.

(d) Inspection of roads and bridges has been seriously handicapped by shortage of transport. Nevertheless, valuable work has been done, especially in reorganising maintenance of State roads through the appropriate department (late A.A.S.S.) of the Genio Civile.

The volume of work in connection with bridge reconstruction has greatly increased and is still growing. The following bridge projects have been handled during the month :

Bridges	on Military highways	36
"	on Provincial highways	45
"	in City of Florence	4

Declassified E.O. 12356 Section 3.3/NND No. 785019

The Genio Civile officials in each Province were instructed to prepare maps showing all damaged bridges. Four of the desired maps have been received shewing, so far, a total of 1,362 bridges that require reconstruction or major repairs. Demolitions in this area were on a very extensive scale and it is emphasised that a large bridge reconstruction program must be anticipated.

(e) Removal of debris, and demolition of dangerous buildings, effected during the month, cost approximately 14 million lire. These operations were carried out over a wide area, but there is still much work to be done.

(f) Arrangements are being made to embark upon a comprehensive survey of the Housing problem as soon as conditions permit. It is evident that local Authorities will require much assistance with this problem, especially in the forward areas.

(g) Of public works in general it is reported that the highest priority has been given to flood control schemes, because of the advanced season of the year and the consequent anticipation of highwater in the basins of the rivers Arno, Serchio and Ombrone.

(h) Public works projects totalling over 75 million lire, in value are at present in hand. These include debris removal, demolition, water supply, sewerage, canals, land-drainage, flood control, State and public buildings, hospitals, schools, etc.

(i) Close liaison has been maintained with the Education, Public Health and other specialised Departments of A.M.G., Toscana Region, and it has been agreed that no project concerning a specialised department shall be approved without the concurrence of the specialist officers concerned.

(j) The Regional Engineer reports that all officials of the Genio Civile in his Region are working well and are giving their full co-operation.

(k) The Regional Engineer has expressed considerable anxiety over the general shortage of road transport which, he points out, results not only in delayed work, but also insufficiency of supervision both by Military officers and by civilian officials of the Genio Civile and the public utility undertakings.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(g) Of public works in general it is reported that the highest priority has been given to flood control schemes, because of the advanced season of the year and the consequent anticipation of highwater in the basins of the rivers Arno, Serchio and Ombrone.

(h) Public works projects totalling over 76 million lire, in value are at present in hand. These include debris removal, demolition, water supply, sewerage, canals, land-drainage, flood control, State and public buildings, hospitals, schools, etc.

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6531

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

38. EMILIA REGION (Regional Engineer: Major W.M. SPANN).

(a) The personnel of this division was engaged in assisting 5th and 8th Army AMG Headquarters, and in various duties in the Army area, in cooperation with provincial teams, as advances were made. On the 5th Army side, a conference was held with the C.R.E. regarding maintenance of roads in 13th Corps Area, and assistance was rendered to the city of Pistoia with its water and lighting. On the 8th Army side, the work covered general assistance on lighting, water, and operations in connection with flour mills.

(b) Maintenance and reconstruction work on all highways at this time comes under Army Engineers and CMS's. The need for Bailey bridges from roads not now required for military purposes will necessitate immediate work in Forli Province on reconstruction of bridges or construction of diversions. Plans are being made for this work. Heavy rains are expected to render the task more difficult. Attention is also being given to damage done to roads and bridges in San Marino.

(c) On the 5th Army front the City of Pistoia was provided with 3000 cubic metres of water per day by making repairs to damaged aqueducts. An additional 1,000 cubic metres will be provided by repairs to pipe lines now in progress. Materials were supplied by 5th Army and labour was furnished by the Commune. The power plant of S.Marcello was repaired and put into operation by the power company, producing about 700 KW, of which 450 KW was allocated to Pistoia for mills and lighting, the remainder going to military installations in 4th Corps area.

On the 8th Army side the water mains were repaired and pumping station reconstructed to supply water to Riccione, Cattolica and part of the City of Rimini. Diesel engines were obtained and generators set up in the power station at Cattolica to deliver about 115 KVA. Repairs were made to transmission lines over 12 Kilometers to deliver power to the pumping station at Riccione. Three electric pumps are in operation with a capacity of 47 litres per second. The reservoir was used by the enemy as a latrine and is now being cleaned and sterilized. In the meantime water is being delivered direct to the distribution system.

Assistance has been given to AMG 8th Army in obtaining machinery for operating flour mills in the communes of Savignano and Cattolica. Sulphur mines are being investigated at Formignano. Advice was given to the Monticone Commune on its water supply and on the securing of various supplies. Work will shortly be started on the water supply at Rimini.

The area south of Ravenna, including Cervia, has been flooded by the destruction of dykes along the Savio River and of

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On the 8th Army side the water mains were repaired and pumping station reconstructed to supply water to Riccione, Cattolica and part of the City of Rimini. Diesel engines were obtained and generators set up in the power station at Cattolica to deliver about 116 KVA. Repairs were made to transmission lines over 12 Kilometers to deliver power to the pumping station at Riccione. Three electric pumps are in operation with a capacity of 47 litres per second. The reservoir was used by the enemy as a latrine and is now being cleaned and sterilized. In the meantime water is being delivered direct to the distribution system.

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The area south of Ravenna, including Cervia, has been flooded by the destruction of dykes along the Savio River and of gates in canals to the salt works at Cervia. Of the two pumping stations at Cervia one is totally destroyed but the other is in good order. The local commune engineer, with the aid of the local CAO, will immediately start operations to restore conditions north of the city. The area south of the city will drain by gravity to a certain level at low tide, but some areas will be wet until new pumps can be installed. All the power plants so far inspected are destroyed, and power in the area will have to be imported or supplied by local temporary installations until equipment can be secured for rehabilitation.

Damage to buildings varies to a large degree, some places in Rimini being totally destroyed. The area along the Adriatic

Declassified E.O. 12356 Section 3.3/NND No. 785019

is low and in places swampy. Antimalarial measures at present are being handled by the Armed Forces.

(d) The Regional Engineer complains of shortage of transport. He also says that civilian cars are practically useless in the mud and damaged areas.

31. PIEMONTE AND LIGURIA REGION. (Regional Engineer: Lt.Col. C.R.BIRCHETT)

No active work has been possible, beyond continued planning. Some officers of the Regional Engineer's staff have been temporarily transferred to render assistance in other Regions.

32. LOMBARDIA REGION. (Regional Engineer: Lt.Col. G.F. BOLTON, R.A.)

There is nothing to report from this Region. The Regional Engineer and his skeleton staff have been temporarily transferred to assist in other Regions.

33. VENEZIA REGION. (Major W. KNIGHT, M.C.)

Precisely similar to the above remarks on Lombardia.

L.A. JENNY,
Lt-Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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6539

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

10 Sept. 44

SUMMARY OF ACTIVITIES DURING AUGUST 1944

1. General Observation.

(a) Letter No. PS/3 dated 6 Aug.44 from the Economic Section to this Sub-Commission referred to a Conference held on the 23rd July, at which the Vice-President requested Sub-Commissions to consider their "record of achievement", and be prepared to state "why they have not accomplished more". They were to detail, also, "the various obstacles to progress, and what they had done to surmount them". Stated in this way, in the form of short sentences, the instructions were simple. Compliance with them, however, proved to be far from simple. It meant going back over the whole work of the Sub-Commission through a period of nearly a year, and the re-examination of a large proportion of the information given in consecutive series of Monthly Reports, from November 1943 to the present time. Many other records and documents, bearing on obstacles encountered and the way they had been overcome, also had to be examined. The other part of the task, viz. as to why the Sub-Commission has "not accomplished more", was even more difficult, as to both form and substance. The two parts of the task, as set by the Vice-President, in fact have tended to coalesce into one, i.e. difficulties that were not surmounted became, ipso facto, in themselves particular reasons why an even greater measure of success was not achieved.

That Report has been prepared and submitted. It is lenghty and detailed. It could not be otherwise. Apart from its general conclusions about difficulties and their solution, the Sub-Commission took the trouble to get individual reports from Regional Engineers (now 10 in number) ranging from Sicily to Rome, and from Rome to VIIIth and IXth Regions in the North. These were obtained in order that each Regional Engineer could furnish his own first-hand story. Perusal of those separate reports indicates (with numbers of specific instances) and proves the general conclusions reached, to the effect that obstacles and difficulties always turned on a few principal things, such as the complete disorganisation of the Genio Civile (Italian Public Works Department) in the matter of its personnel and offices; difficulty of communications (telephonic, telegraphic and postal) in the early months; almost complete lack of vital important structural material, ranging from steel for bridges to bitumen for road surfacing; and, exceeding all those in importance, [illegible] transport facilities. By the latter is not [illegible] carrying vehicles

Declassified E.O. 12356 Section 3.3/NND No. 785019

detail. And, [illegible] had done to surmount them". Stated in this way, in the form of short sentences, the instructions were simple. Compliance with them, however, proved to be far from simple. It meant going back over the whole work of the Sub-Commission through a period of nearly a year, and the re-examination of a large proportion of the information given in consecutive series of Monthly Reports, from November 1943 to the present time. Many other records and documents, bearing on obstacles encountered and the way they had been overcome, also had to be examined. The other part of the task, viz. as to why the Sub-Commission has "not accomplished more", was even more difficult, as to both form and substance. The two parts of the task, as set by the Vice-President, in fact have tended to coalesce into one, i.e. difficulties that were not surmounted become, ipso facto, in themselves particular reasons why an even greater measure of success was not achieved.

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Declassified E.O. 12356 Section 3.3/NND No. 759019

This is the crux of what is meant by "lack of transport". It has been explained, stressed, and reiterated so many times in the Monthly Reports of this Sub-Commission that it is, at the present stage of things, displeasing to have to mention it again. Of all "obstacles to progress" enumerated it can now be stated that, if the Sub-Commission had entered on its duties, a year ago or less, with anything from 250 to 500 lorries or trucks at its disposal, results achieved would have been far more satisfying.

(b) Reorganisation.

Reorganization of the work of the Sub-Commission (referred to in some detail in Para. 1 of the Report for July) has continued to work increasingly satisfactorily. It was inaugurated at a meeting of Regional Engineers held in Naples early last June and came into force on the 10th of that month. Similar meetings held in Rome at the end of July and at the end of August served to indicate smooth working. Above all the reorganisation scheme, coupled with the holding of regular Regional Engineers' Conferences here at Headquarters, has contributed to a feeling of solidarity, inculcation of a valuable "team spirit", and interchange of ideas. Last, but not least, whilst the Regional Engineer is the responsible representative of the Sub-Commission "in the field", he is also both a liaison and executive Officer in his relationship with the Armies, from whom he is constantly taking over additional tasks; and with the Italian Genio Civile. A main duty, at all times, is also that of acting as Engineering Adviser to his Regional Commissioner, and to Provincial and other Officers within his Region.

(c) Italian Authorities.

Para. 1 of the July Report made reference to the Minister of Public Works (Signor MANCINI) and also to Signor TIZZANO, the Director General of the Genio Civile. This latter appointment is an extremely important one, and we wish to place on record the great assistance that Signor Tizzano has constantly given to the Sub-Commission during the last 3 months, in spite of one or two rather serious illnesses. He has recently brought to our notice the regrettable fact that in August he was subjected to bitter personal attacks on the part of a news-paper published in Naples. The attacks are phrased in caustic and exaggerated language, and it is Signor Tizzano's intention to sue the writer and publisher for libel. In the meantime, the matter being "sub-judice", his position is not too easy. (The facts of the matter, as known to date, are being communicated to the Administrative Section for information.)

Relations with the Minister continue to be satisfactory. This is used in the strict sense of the term, since anything more might constitute an over-statement. Anything less, on the other hand, might be unfair to him.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Relations with the Minister continue to be satisfactory. This is used in the strict sense of the term, since anything more might constitute an over-statement. Anything less, on the other hand, might be unfair to him.

(d) Functions.

Since October 1943, when A.C.C. was in North-Africa, there had been no revision of the functions and responsibilities of this Sub-Commission. Under instructions from the Economic Section (letter No. ES/3, dated 3 Aug. 44) the matter was

Declassified E.O. 12356 Section 3.3/NND No. 785019

re-examined in August and a clearer and more comprehensive statement of them was made. Twelve months' experience had revealed that, though the original statement was on sound lines, the time had come to make some modifications and additions.

(c) Discussions.

In meetings with the Minister on the 18th and 31st of August matters such as the following were taken up:-

- Genio Civile (General organisation).
- Non-dismissal of Cantonieri gangs.
- Firms of contractors with bad records (lists).
- Sardinia (responsibility).
- Position of A.A.S.S. (dissolved)
- High costs of work in certain areas.
- Increased financial powers in Italian territory.
- Italian Commission on re-housing.
- The Vesuvius eruption (Projects for preventing landslides.)
- Defaucism.

(i) As to Sardinia, the Sub-Commission has had for some time only one Engineer Officer in the Island. Due to demands for staff in the Northern Regions that officer is being transferred on the 15th September, so that all responsibility for Public Works and Utilities in the Island will devolve on Italian agency. The Minister expressed his pleasure at the change, and the confidence that it demonstrates. It has been since arranged, therefore, that the Provveditorato of the Genio Civile, stationed at Cagliari, will from the date mentioned take full responsibility and will act as Adviser to the Regional Commissioner in place of the Allied officer who is being withdrawn. It was been made clear that the arrangement is in the nature of an experiment, and a somewhat important one. If it proves successful and if, as promised, certain regular reports are furnished to the Sub-Commission by the Provveditorato, it may be possible later to take the same course in Sicily.

(ii) Turning to the A.A.S.S. (Aziende Autonome Strade Statali), though this was legally abolished a short time ago, as a separate roads and bridges organization, there have remained here and there some unsatisfactory legacies, i.e., certain officials of the A.A.S.S. have given trouble; they were formerly largely independent, but are now subject to the instructions of the Minister and his Director General. In Rome, and perhaps in other places, administrative offices of the A.A.S.S. are still functioning, causing certain overlapping and possible misunderstanding.

Declassified E.O. 12356 Section 3.3/NND No. 784019

- High costs of work in certain areas.
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- Defaulters.

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(iii) The Minister welcomed the grant of more financial powers regarding projects in Italian territory, viz. schemes costing up to 500,000 Lire need not, from now onwards, be submitted to Regional Engineers for approval so long as non-critical materials only are involved.

(iv) As to re-housing schemes, urgently required in many of the towns in Region IV and elsewhere, the Italian Government proposed in August 6522 up by Decree a special

Declassified E.O. 12356 Section 3.3/NND No. 785019

Body, in view of the magnitude of the problem. Article 8 of the Draft-decree proposed a first allocation of 1 Milliard Lire as a credit, in the budget for the present financial year of the Ministry of Public Works. This Decree set up a new organization to handle these housing projects which would take many months to get going and it had other unsatisfactory provisions. It has been agreed that all this work should be carried out by the Genio Civile under the Minister of Public Works, if speed were desired, which we do.

In the meantime, a recent report from Region IV shows that there are at least 27 towns in which anything between 25 and 100% of the houses will be uninhabitable in the coming winter. Of these 27, no less than 14 are inhabitable to the extent of more than 60%.

In August the Sub-Commission examined what purported to be a scheme, on a very small scale, for the re-housing of a fraction of the Cassino population. It was found to be both incomplete and unsound in various essentials, such as lay-out of site, water supply, sewerage and other things. It also proposed the use of materials that are held (in very limited stocks) for strictly military requirements. If the Sub-Commission had endorsed the proposals, as they stood, it would indeed have been guilty of "assisting in the planning and construction of a slum". In the result a revised scheme was submitted, based on suggestions made, and there is a prospect of some thing being done promptly.

For the rest, however, it has been tentatively agreed that housing is required in the following places in varying degree to a total number of :-

Velletri	60	San Giorgio	20	Fondi	20)	
Valmontone	50	Pignataro	20	Itri	20)	
Lanuvio	20	Cassino	120	Formia	40)	total
Genzano	20	Piedimonte	40	Elena	20)	670
Frascati	40	Cisterna	50	Minturno	20)	
Tivoli	30	Aprilia	10	Castelforte	20)	
Ausonia	10	Terracina	40			

(v) Concerning the Vesuvius eruption of last March, which was referred to in some detail in the Sub-Commission's March and April Reports, it was then represented to the Sub-Commission that there might be a serious disaster when the autumn rains come, through landslides coming down from the large new cone on the summit. An expenditure of several hundred Million Lire was envisaged, but financial approval was refused in the absence of at any rate an outline scheme of the remedial measures proposed. The Minister's Department was dilatory in preparing a scheme, and in spite of the

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

(vi) During August the Minister was absent from Rome for some time, and the Director-General was ill for several weeks and unable to act for him. Dealings had to be carried out through subordinates; not entirely satisfactorily. Apart from matters already mentioned the following were also covered:-

- Financing of projects.
- Bonifiche (Land-reclamation and Anti-Malaria).
- Appointment of Italian engineers (to a pool, ready to move northwards at short notice).
- Raising of sunken ships in ports.
- Posting of Italian electrical engineers to take over specialised duties in Regions, thus relieving Sub-Commission staffs.

(f) Personnel.

Para. 2 of this Report gives a list of Officer Personnel as at 31st August 1944, together with comments indicating transfers or alterations contemplated. Portion (A) shows the HQ. list, whilst portion (B) gives the Regional lists.

The numbers shown are 19 and 43 respectively, giving a total of 62. On the data mentioned there is a deficiency of 12, since the total establishment should be 74.

As stated in Para. I (b) of the July Report, personnel and staffing questions continue to take up a large amount of time.

The Sub-Commission's letter dated 27th August 44 to Economic Section again stressed difficulties caused by delays in the carrying-out of transfers from one Region to another. Four examples were noted in the July Report, and the letter of 27th August pointed out another and still more glaring case. On the 1st August the transfer of a certain officer was requested from Region IV to Region V. More than a month later the officer concerned was still in Rome, and apparently still attached to Region IV.

It cannot be emphasised too strongly that these "delaying tactics", which is the only way to describe them, militate strongly against efficiency: more particularly in view of the fact that the Sub-Commission still remains below strength to the extent mentioned.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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8527

Declassified E.O. 12356 Section 3.3/NND No. 785019

2. Nominal Roll of Officers.

(A) At Headquarters, and on temporary duty elsewhere:-

Lt.Col. L.A. Jenny, C.E.	(A) Director, Sub-Commission
Lt.Col. G.E. Rhodes R.E.	(B) Deputy Director, Sub-Comm.

Public Works Division.

Lt.Col.V.S. Thompson, R.C.E.	(B) Chief, Public Works Div.
1st Lt.R.W. Shepherd	(A) Asst.to Chief P.W. Div.
Major N.W. Hyland	(A) P.W.O. South.
Major C.L. Hasie	(A) P.W.O. North.
Lt.Col. C.P. Bolick	(A) Awaiting Assign.to Region XI

Utilities & Adm. Div.

Lt.Col. W.H. Lapper	(B) Chief, Utilities & Adm.Div.
Capt. L.W. Laughlin	(A) Asst.to Chief, Util.& Adm.Div.
Major H.W. Westwood	(B) Water Gas & Drainage.
Capt.A.E. Preedy	(B) Admin. Officer.
Major E.J. Barry	(A) Elec.Util.O. Generation
Major V.S. Renton	(A) " " " Transmission
Capt. H.J. Roseon	(A) T/D Region IV.
Capt. R.A. Ryan	(A) Elect.Util.Officer South
Major H. Larson	(A) T/D Region IV
Major R.A. Bell	(A) Elect.Util. Officer
Major A. Crowther	(B) Awaiting Assign.to Region XI
Lieut. J.W.L. Butcher	(B) Elec. Util. Officer

(B) On present information and subject to correction the following Public Works Officers are permanently assigned to Regions as shown:-

Region I.

Major D.A. Boyd	(B) Regional Engineer Officer

Southern Region

Lt. Col. L.J. Hendley	(A) Regional Engineer Officer
Major W. Knight	(B) Deputy Regional Engr.Officer
Major W.F. Chamberlin	(A) Public Works Officer
Capt. R.N.J. Hibbard	(B) Highways
Capt. J. Lambie	(B) Highways
Capt. A.G.A. Saul	(B) Highways
Lt.E.M.H. Stephens	(B) Highways
1st Lt. P.A. Sproule	(A) Elec. Util. Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

Utilities & Adm. Div.

Lt.Col. W.H. Lapper	(B) Chief,Utilities & Adm.Div.
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Capt. H.J. Rossen	(A) T/D Region IV.
Capt. R.A. Ryan	(A) Elect.Util.Officer South
Major H. Larson	(A) T/D Region IV
Major R.A. Ball	(A) Elect.Util. Officer
Major A. Crowther	(B) Awaiting Assign.to Region XI
Lieut. J.W.L. Butcher	(B) Elec. Util. Officer

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Region I.

Major D.A. Boyd	(B) Regional Engineer Officer

Southern Region

Lt. Col. L.J. Bendley	(A) Regional Engineer Officer
Major W. Knight	(D) Deputy Regional Engr.Officer
Major W.F. Chamberlin	(A) Public Works Officer
Capt. R.N.J. Hibbard	(B) Highways
Capt. J. Lambie	(D) Highways
Capt. A.G.A. Saul	(B) Highways
Lt.P.M.H. Stephens	(D) Highways
1st Lt. P.A. Strolia	(A) Elec. Util. Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

Region IV.

Lt.Col. C. de C.E. Findlay	(B) Regional Engineer Officer
Lt.Col. C.R. Birchett	(A) Awaiting Assign.to Piedmont R.
Major A.G. Evans	(B) Public Works Officer
Major G.P. Buckley	(A) Public Works Officer
Major A.E. Michel	(A) Public Works Officer
Capt. W.F. Leughton	(A) Public Works Officer
Capt. W.R. Gentry	(A) Highways
Capt. T.F. Spriggs	(A) Highways
Capt. A.J. Greene	(B) Highways
Lieut. E.F. Wade-Brown	(B) Elect.Util.

Region V.

Lt.Col. C.A. Latimer	(A) Regional Engineer Officer
Major L.B. Denning	(B) Public Works Officer
Major J.C. Rively	(A) Public Works Officer
1st Lt. Welsh	(A) Highways
Major J.E. Foden	(B) Elect. Util. Officer
Major J.S. Bennett	(B) Elect. Util. Officer

Region VI.

Capt. E.E. Smith	(A) Regional Engineer Officer

Region VIII.

Major P.S.L. Lee	(B) Regional Engineer Officer
Lieut. L.J. Hodges	(B) Public Works Officer
Capt. T.R. Brewalee	(A) Highways
Capt. P.R.C. Stephens	(B) Elect. Util. Officer
Major G.C. Eberle	(A) Attached Pendg. assign. to Reg. XI.

Region IX.

Major W.M. Spann	(A) Regional Engineer Officer
Major W.H. Gamble	(A) Public Works Officer
Major E.H. Richardson	(A) Attachd.Pendg.ass.to Reg.XI
Capt. R.F. Wueber	(A) Highways
Capt. E.H. Rogers	(A) Elect. Util. Officer

Region XII.

Col. E.J. Edwards	(B) Regional Engineer Officer
Capt. E.D. Feldman	(A) Public Works Officer
Major A.G. Perley	(B) Highways
[illegible] Wilson-Heathcote	(B) Highways

Declassified E.O. 12356 Section 3.3/NND No. 785019

Region V.

Lt.Col. C.A. Letiner	(A) Regional Engineer Officer
Major L.R. Denning	(B) Public Works Officer
Major J.C. Rively	(A) Public Works Officer
1st Lt. Walsh	(A) Highways
Major J.E. Feden	(B) Elect. Util. Officer
Major J.S. Bennett	(B) Elect. Util. Officer

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Capt.J.S.C. Wilson-Hosthcote	(B) Highways
Major A.C. Wooster	(A) Elect. Util. Officer

6526

Declassified E.O. 12356 Section 3.3/NND No. 785019

3. Miscellaneous Matters.

(a) Cost of War Damage (Repairs).

This was outlined in Para.4 of the July Report, in the form of an approximate estimate, with a reference to a letter to Economic Section dated 5th August 1944, from this Sub-Commission. The total was 2,704 Millions of Dollars. Information received in August does not tend to modify that figure, or reduce it. On the contrary, further and more detailed examination of facilities destroyed, such as large electrical power generating stations, emphasises that the estimate may have been a conservative one.

(b) Genio Civile.

Reference has frequently been made in these Monthly Reports to the disorganisation, lack of experienced personnel, short working hours (Refer to Para 3/a/ of July Report) and other troubles pertaining to the Genio Civile. These things are still causing delays (e.g. the Vesuvius matter mentioned above) and they are also resulting in a poor standard of technical and even arithmetical accuracy in the submission of engineering projects. As an example, a letter from the S.C. dated 14 August to the Regional Engineer, Region IV, was obliged to refer to an important scheme in the following terms:-

> "The shockingly careless manner in which the estimate was prepared by the Genio Civile has caused much trouble, and consequently some delay, in this office".

This referred to proposals concerning the River Rapido and its tributaries, in the Cassino area. There were not only errors in individual items, but even the totals were incorrect. In the result the original figure of 6 ½ Million Lire for the scheme was finally approved, four days later, in the sum of only 3.35 Million Lire. /Complaint was lodged directly with the Minister, and as to similar instances of carelessness./

(c) The Minister was advised, in the middle of August by letter, and it had also been previously discussed, that it was proposed "gradually to turn over more functions in Sardinia, Sicily, and South Italy, depending upon the Ministry's ability to undertake such tasks". Without going into details here, proposals were given as to a proposed withdrawal of our specialised electrical engineers, and their replacement by Italian specialists in specified Regions. Such substitutes to be required to familiarise themselves, through the Regional Engineer and his staff, with the complex problems now existing

Declassified E.O. 12356 Section 3.3/NND No. 785619

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Declassified E.O. 12356 Section 3.3/NND No. 785019

(d) There were complaints from Regions I and IV that contractors bills were being unaccountably delayed in payment. The same applied to wages of the Cantonieri (on roads). This has been a recurring difficulty for months. Apart from technical and other mistakes in the submission of schemes and projects, for examination, it indicates a far from satisfactory understanding between the Italian Ministry of Public Works and the Italian Ministry of Finance. (This letter was also referred directly to the Minister.)

(e) The Minister has been asked immediately to increase the fund set up last February of 600 Million Lire (Military Highways and Bridges expenditure) to 1,000 Million.

(f) It was noted in the July Report of the Finance Sub-Commission that in "Liberated Italy" the Italian Governments' estimate of Public Works expenditure for May was 57 Million Lire and in June 78 Million. Actual cash disbursements in April were about 61 Million, and in May the same amount. A further statement showed "accreditamenti" for Public Works as 43 Million Lire in April and 91 Million in May. These figures show the rate at which such expenditure tends to increase, and the increasing momentum of a Public Works program.

(g) The H.Q. Commandant requested a certain bridge to be rebuilt between Rome and the coast, to facilitate rest and recreational activities. A special survey was made and a report rendered.

(h) U.N.R.R.A. (Observation Mission).

Representatives of U.N.R.R.A. (Observation Mission) visited the Sub-Commission several times in August. Every possible assistance was afforded, and various requests for written reports and details were complied with. In this connection a mild protest should be registered:-

It is somewhat disconcerting, after one has given considerable time to answering questions in an interview, to be asked by the interviewer to give the whole thing in writing. In the last few months there have been many of these "moving Commissions", from Washington, London, Cairo, and elsewhere. They ask the same type of questions and get the same kind of answers. Few of them seem to have acquired the art of taking notes in the course of an interview and they have no hesitation, apparently, in trespassing on the time of people, perhaps busier than themselves, in asking to have everything twice over, viz. in the course of an interview, and again in written form.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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/ The particular matter here referred to was set out in a letter 10th August from Economic Section (Ref.No. ES/35), and a written statement was furnished with this Sub-Commission's letter to Economic Section No. ACC/130/TWU., dated 14th August./

(i) Ministry of Supply.

Meetings were attended concerning the possible establishment of an Italian Government Ministry of Supply. The views of the Sub-Commission were put forward, but nothing further has yet been heard of the revised "terms of reference", said to be under preperation.

Declassified E.O. 12356 Section 3.3/NND No. 784019

(j) Statistical Survey.

In connection with the Statistical Survey about to be undertaken in Liberated Italy by a special staff, under the orders of the Vice-President Economic Section, a meeting was attended and was followed by a visit to the building where that staff is working, in order to assist in the compilation of appropriate queries.

(k) Salvage.

The question of collection and classification of salvaged materials was mentioned in previous Monthly Reports, and early in June a letter was received from the Deputy Executive Commissioner, A.C.C., stating that after consideration of the relevant factors no action by A.C.C. was contemplated "for the present". Nevertheless, the matter has continues to engage the attention of the Sub-Commission from the standpoint of any possible local and immediate advantage. The Minister of Public Works was told, for example, in August that his Department might make use of timber and other materials found in old or damaged air-raid shelters, for its various re-housing programs. The assumption is that these shelters vest in the Government, and are not private property.

The position under Italian law as regards disused and semi-derelict materials (steel girders, timber, fittings, etc.) found on bombed and damaged private properties is not exactly known. It is, at any rate, very different from the position in England. There, if a private property is damaged beyond a certain point, and duly certified to that effect, ownership of the available debris and material passes from the individual to the State, and it can immediately be re-used in the public interest where ever it may be most needed.

Here, we understand the position to be that no matter how badly a building may be damaged, ownership of the material still continues to vest in the firm or individual. This is a major handicap to speedy reconstruction and first-aid repairs, even on a limited scale. / It may be that the Economic Section, in conjunction with the Legal Sub-Commission, can clarify the matter, perhaps to the extent of asking the Italian Government to frame a Decree, and so amend the existing law./

(l) Sunken ships (Ports)

Concerning salvage of sunken ships, noted in our July Report Para. 4 (e), there was further correspondence in August, through the Navy Sub-Commission. All that can be said at the present juncture is that the line of responsibility has not been settled, i.e. between the Allied Navies, the Italian [illegible] the Allied Control Commission. (The [illegible] Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

and early in June a letter was received [illegible] Deputy Political Commissioner, A.C.C., stating that after consideration of the relevant factors no action by A.C.C. was contemplated "for the present". Nevertheless, the matter has continues to engage the attention of the Sub-Commission from the standpoint of any possible local and immediate advantage. The Minister of Public Works was told, for example, in August that his Department might make use of timber and other materials found in old or damaged air-raid shelters, for its various re-housing programs. The assumption is that these shelters vest in the Government, and are not private property.

The position under Italian law as regards disused and semi-derelict materials (steel girders, timber, fittings, etc.) found on bombed and damaged private properties is not exactly known. It is, at any rate, very different from the position in England. There, if a private property is damaged beyond a certain point, and duly certified to that effect, ownership of the available debris and material passes from the individual to the State, and it can immediately be re-used in the public interest where ever it may be most needed.

Here, we understand the position to be that no matter how badly a building may be damaged, ownership of the material still continues to vest in the firm or individual. This is a major handicap to speedy reconstruction and first-aid repairs, even on a limited scale. [It may be that the Economic Section, in conjunction with the Legal Sub-Commission, can clarify the matter, perhaps to the extent of asking the Italian Government to frame a Decree, and so amend the existing Law.]

(i) Sunken ships (Ports)

Concerning salvage of sunken ships, noted in our July Report Para. 4 (e), there was further correspondence in August, through the Navy Sub-Commission. All that can be said at the present juncture is that the line of responsibility has not yet been settled, i.e. between the Allied Navies, the Italian Ministry of Marine, and the Allied Control Commission. (The whole position was outlined in a letter from the Flag Officer Liaison Italy, Allied Control Commission, dated 2nd Sept. 44, to the Commander in Chief Mediterranean, with a copy to this Sub-Commission.)

Declassified E.O. 12356 Section 3.3/NND No. 789019

4. Electric Power (Destruction).

Para 4 (b) of the July Report stated that even after such repairs as may be possible, no less than six-sevenths of the generating plant is destroyed. The Electrical Division of the Sub-Commission concentrated its energies in August on the compilation of very complete data and reports. These are of such extreme importance that they are attached hereto in the form of 2 appendices, marked (A), and (B). The more important one is Appendix (A) which furnishes an over-all description of the critical position in Central Italy. Appendix (B) deals with Southern Italy.

No attempt is made here to summarise them, save to the following extent:-

(i) Dissolution of the Central Electricity Board in July has wrecked the work of the Electrical Division of this Sub-Commission.

(ii) Out of 60 large hydro-electric stations 30 are totally destroyed and beyond repair; 14 can be partially repaired in 12 months; and 16 in 6 months (possibly).

(iii) The Electrical Reconstruction Committee has just recommended the importation of a 60,000 KW. Generating Plant.

(iv) This might save 90,000 tons of shipping per month, if large factories can be re-started in Italy.

(v) The Italian Government have agreed to pay.

Action has been taken concerning this, which can only be described as an almost desperate situation, by the Vice-President of the Economic Section. Its importance has also been emphasised and re-emphasised at A.F.H.Q. by no less than four special visits to that H.Q., three in August and one early in September, undertaken by the Director of the Sub-Commission and the Chief of the Electrical Division (Lt.Cols. Jenny and Lapper). Complete additional data was furnished by way of "justification", and all requests of A.F.H.Q. in this connection were complied with.

It is to be recorded at the present juncture, however, that no tangible result has emerged.

Valuable weeks of time have been lost, and from the moment the serious situation indicated was discovered (at the end of July, when the Central Electricity Board was dissolved) the time should have been spent in selecting and having despatched to Italy, from overseas, any and every kind of emergency [illegible] that could be obtained. It is useless to begin even

Declassified E.O. 12356 Section 3.3/NND No. 785019

following effect:-

(i) Dissolution of the Central Electricity Board in July has trebled the work of the Electrical Division of this Sub-Commission.

(ii) Out of 50 large hydro-electric stations 32 are totally destroyed and beyond repair; 14 can be partially repaired in 12 months; and 16 in 6 months (probably).

(iii) The Electrical Reconstruction Committee has just recommended the importation of a 60,000 KW. Generating Plant.

(iv) This might save 90,000 tons of shipping per month, if large factories can be re-started in Italy.

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It is to be recorded at the present juncture, however, that no tangible result has emerged.

Valuable weeks of time have been lost, and from the moment the serious situation indicated was discovered (at the end of July, when the Central Electricity Board was dissolved) the time should have been spent in selecting and having despatched to Italy, from overseas, any and every kind of emergency substitute that could be obtained. It is useless to begin even to think of the industrial rehabilitation of Italy, even on a most limited scale, unless electricity can be furnished. It is the keynote of the economic life of the country.

6524

Declassified E.O. 12356 Section 3.3/NND No. 785019

5. Regional Engineers' Conference (Rome, 28 Aug.44)

(a) Regional Engineers or their representatives from all Regions were present, with the exception of Region I. All stressed, as the keynote of their difficulties, the twin problems of getting structural materials, and keeping such very limited truck-transport as they have "on the road", in order to move materials to where they are required. There were reports that both British and American Units have no compunction about removing (in other words stealing) stocks of stone, chippings, and other things laboriously transported for road and bridge work to remote places. The question of taking over, or controlling in some manner, cement factories and brick or tile work was discussed; in some instances the Armies have ceased to control these in Southern and Central Italy, as the advance has gone on northwards. Regional Engineer VII (now merged in the Southern Region) thought that before long Italian engineers can be left to carry on in Calabria.

(b) Mine clearance remains in very many areas a most serious problem. Casualties tend to be high, even with Units that are well-trained and provided with full detection equipment. In Region IV an Italian Unit for this purpose, and so designated, had arrived early in August. They were under strength and arrived without any training, rations or equipment. Having accomplished nothing at all, at the end of August they were on the point of leaving. Regional Engineers working immediately in the rear of the Armies also report a grave and very natural reluctance on the part of civilian contractors and workmen to undertake quick road and bridge or building rehabilitation, with all these dangers lying about. From a policy point of view it would seem to be right and proper that the Italian Army should, through its engineer units, really get to work. Everybody prefers that this unpleasant work should be done by somebody else, and the Italians (perhaps) would like it all to be done by the Allies. The work lies behind the combat zones, and it is high time that the Italian Army really "get down to it".

(c) If they do not, it will constitute for months, or perhaps for years, a desperate handicap on all works of physical reconstruction and rehabilitation. In areas south of Rome, for example, it is suspected (to the point almost of certainty), that there are still thousands of German mines lying about at the side of roads, near bridges, and in and about demolished buildings in various towns and villages.

(d) There was a suggestion, further, that a recent decision

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(d) There was a suggestion, further, that a recent decision is to place general responsibility under the Public Safety Sub-Commission.

(e) In Region VIII the organisation of the Genio Civile has improved and good work is being done.

Declassified E.O. 12356 Section 3.3/NND No. 780019

6. Bonifiche (Land-reclamation Works).

In August about 48 Million Lire was approved by the Finance Sub-Commission, after a delay that had held up the works for several weeks, for a project of rehabilitation on the Pontine Marshes. During the month a Committee was formed representing the Agriculture, Finance, Legal, Public Health and this Sub-Commission, with a view to considering the very large progress to be faced further north, of this kind. At the meeting a University Professor, engaged by the Agricultural Sub-Commission, gave an outline of possibilities in the Po Valley, where problems fifty times bigger than those of the Pontine Marshes may arise if the Germans go on destroying canals, bridges, and pumping stations on the scale they already have done. Not only is the area important from an anti-malarial standpoint, but it also produces enormous quantities of food crops for Italian consumption. Again, apart from these two considerations, some of the streams and canals flow at levels above that of the surrounding country. If the Germans breach the embankments whole towns and villages may be flooded. There are also problems of a similar kind, but fractional in scope compared to those in the Po Valley, in the Province of Grosseto.

In the meantime it is to be noted that Col. Russell (Anti-Malarial Branch, A.C.C.) stated at the meeting that conditions in the Pontine Marshes are now personally "back to what they were in the year 1930".

Information regarding possibilities and probabilities in the Po Valley has been passed, with maps and copies of reports, to the Executive Officers and to the Regional Engineers of Regions IX and XII.

7. Defascism.

This matter was referred to in the July report Para.3 (j). Continuous pressure is being kept up through the Minister of Public Works to expedite the work of the Italian Commission charged with the duty. The Commission not only has to cover the very large personnel employed by that Ministry, but also numerous large public utility undertakings. The Minister is not inclined to accept the suggestion that more than one Commission should be appointed, in view of the extent and complexity of the work.

In the meantime, on instructions of the Vice-President of Administrative Section, the Deputy-Director of this Sub-Commission will make personal contact with the Commission, which sits at the Ministry of Public Works several days a week (Rome) in order to see how the proceedings

Declassified E.O. 12356 Section 3.3/NND No. 785019

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In the meantime, on instructions of the Vice-President of Administrative Section, the Deputy-Director of this Sub-Commission will make personal contact with the Commission, which sits at the Ministry of Public Works several days a week (merely as an observer), in order to see how the proceedings are conducted, and possibly to instill a little greater activity.

8. Public Utilities (Rates to Consumers)

Applications from Gas, Water, Electricity and other Companies to be allowed to increase their charges to consumers are now being channelled through the Ministry of Public Works, so that the primary responsibility will rest on Italian agency, rather than on this Sub-Commission. The duty of the Sub-Commission is thus that of examining the recommendations, and endorsing them in proper cases.

Declassified E.O. 12356 Section 3.3/NND No. 785019

During August the Ministry forwarded two applications from Gas Companies and two from Electricity companies. Three were approved. Nine similar applications were sent to the Ministry in August, 6 of these being from Electricity Companies.

Ever since last February these questions have kept cropping up, and by the month of July about 20 applications had already been dealt with. The drop in the value of the Lira as to its internal purchasing power, coupled with reduced revenues and very heavy war damage bills have put most of these companies into a financial position of extreme seriousness.

9. Highways, Bridges, and Public Works.

(a) New Contracts in hand

(A) Roads and Bridges during month	83
(B) Misc. (Buildings, Provincial projects etc.)	33

(b) Funds expended or obligated

(A) Highways during month	127,194,000	Lire
(B) Misc. (Buildings, Provincial projects etc.)	58,674,000	"
(C) Total Highways up to Aug. 31	594,412,312	"
(D) Total Misc. " " " "	70,102,700	"

(c) Personnel

With the activation of new forward areas Regional Engineer personnel was gradually reduced in Italian Gov't. Territory. Additional Italian Civilian Engineers were employed as replacements. Satisfactory results are being obtained. It will be increasingly important that this trend be continued, so as to give all possible officer strength to critical forward Regions.

(d) Transport

No additional transport was obtained during the month. The W.D. (172) vehicles on loan to Genio Civile and in use in the Southern Region were utilized to the fullest extent on projects of Military importance, but with increasing difficulties in maintenance. It was never possible to have more than 50 % available for service at one time, and a total of 20 vehicles were retired during the month as unserviceable.

In Regions IV and V a gratifying number of civilian owned trucks are in operation on construction. It is vitally important, however, that tyres and tubes be made available for these vehicles at an early date. The case applies to motorcars

Declassified E.O. 12356 Section 3.3/NND No. 785019

(A) Roads and Bridges during month [illegible]
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(e) Labour.

During the month no serious difficulties were encountered in keeping projects manned. Through contractors and Italian Govt. Engineers increasing complaints were received about the inadequacy of wage schedules, but only in the Civitavecchia Area have

Declassified E.O. 12356 Section 3.3/NND No. 784019

projects actually suffered for lack of workmen. Efforts have continued to increase Cantonieri forces - particularly in the Southern areas.

(f) P.O.L.

A new system was instituted during the month whereby bulk P.O.L. coupons will be made available to Regional Engineers for contractors on Military Projects. It is believed that the confusion of past days will be largely eliminated by this system, since this type of project will rightly have preference over all other work. Several vital projects in forward areas were delayed for lack of P.O.L.

(g) Rations (food)

No difficulties were encountered in this matter of mid-day meals, or extra rations for workmen. Contractors are supplementing rations for mid-day meals, and in general a satisfactory meal is being served. This has been confirmed by visual inspections by H.Q. officer personnel.

(h) Bridges (General)

The bridge program has been expanding rapidly and to date a total of 230 bridges have been completed or are under construction. The problem reaches greater magnitude as our activities increase in forward Areas, but this is partially offset by the availability of better qualified and better equipped contractors. Progress is satisfactory and on all roads officially turned over to A.C.C. Direction by Military Authorities; construction is under way on every structure which would constitute a traffic block.

(i) Roads (General)

Throughout the Southern Region, reconstruction and emergency repairs have largely been completed. Route No.90 from Ponte Calore through Ariano toward Foggia, which had become almost impassable due to heavy Military traffic, was concentrated on during August and is now in good condition. This was perhaps the most critical section of road on all the A.A.I. priority lists.

Seal-coating, where needed, of all main routes is now under way in the Southern Region, after which our problem will be strictly one of maintenance. Roads throughout the recently liberated Central Italy Areas have withstood the pounding of heavy traffic surprisingly well. All shell and bomb craters have been repaired and maintenance is well in hand. All main

Declassified E.O. 12356 Section 3.3/NND No. 785019

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6522

Declassified E.O. 12356 Section 3.3/NND No. 785019

10. REGION I (Regional Engineer, Major BOYD R.E.)

(a) General

It has become apparent during the past month that there is a diminution in importance of the Region from a Military point of view. The departures of No1 District and I.B.S. confirm this. Nevertheless there are still the ports of Palermo, Messina & Augusta, used extensively by the Allied Navies. In fact, a letter has been received from the Naval Officer, Messina, soliciting numerous works of repair in the harbours. Reduction in importance from a Military point of view has been rapidly followed by a withdrawal of A.C.C. engineering officers from Sicily.

(b) Staff & Personnel.

Last month this Region reported the withdrawal of Lieut. Hodges from Sicily. This transfer has been followed by the departure of Lt.Col. Bolick, Major Gamble and Major Crowther, and leaves the writer as the only Engineer officer of A.C.C. on the island. It follows that his work has been increased. In order to ease the burden of work it will be necessary to employ civilian engineers. As the terms of engagement are so indefinite, it is difficult to find suitable men. There are few good engineers willing to take on a job even at 300 lire per day, when there is no guarantee that they will be employed for even one month. It might be possible to find youths leaving University who would be glad of anything, but what is wanted for this job are well-qualified men with drive and energy, who must be strictly honest; not an easy thing to find in Sicily.

(c) Tours of Inspection.

The Public Works Officer made a tour of inspection in the Province of Agrigento, with Comm. Guggino, Ispettore del Genio Civile. Works of particular interest were bridges on the S.S.115. There are four bridges to be reconstructed on the road between Agrigento and Castelvetrano.

1. The bridge over the Canoe near Siculiana at Km.166.

There is a good temporary bridge of gabion piers, and abutments and it will be able to withstand the winter floods. The progress of reconstruction of the new bridge is very disappointing. If the work is not pushed on, it will not be finished before the rainy season.

2. Bridge over the torrent S. Calogero Km. 120.

Declassified E.O. 12356 Section 3.3/NND No. 789019

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2. Bridge over the torrent S. Calogero Km. 129.

There is a very good temporary bridge constructed by the Army. Contractors are working on the new bridge, which is also behind time.

3. Bridge in the vicinity of Porcospino at Km.131.20

This bridge has been seriously damaged by a landslide, and it will have to be demolished and another built instead.

Declassified E.O. 12356 Section 3.3/NND No. 78 5019

4. Bridge over the Belice.

It was necessary to entrust the work to another contractor as the first one was not moving fast enough. There is a temporary bridge which will serve during the autumn. Three provincial bridges were also inspected, and progress was good.

(d) A very large landslide which occurred in the North East side of Agrigento was inspected. There was a section of very heavy retaining wall completely demolished, and a number of buildings were in grave danger of collapse. / Test work is being carried out to ascertain the exact cause of the landslide./

(e) War damages were inspected in the following towns: Agrigento, Porto Empedocle, Sciasca. The Public Works Officer asked the engineer of the Genio Civile to prepare estimates for all works of demolition, and removal of debris.

(f) A second tour of inspection was made with Major Hyland to the Islands of Ustica, Favignana and Lipari. / The writer does not propose to go into detail, as Major Hyland has covered this tour in his report. The writer would like to put on record the very excellent cooperation of the Italian Navy in putting the means at Major Hyland's and the writer's disposal to visit these places, on the shortest notice. Such assistance is very rarely encountered./ The prisons of Caltanisetta and Augusta were also visited. This programme of prison repairs and additions is being done at the special request of the Public Safety S.C. here at H.Q.A.C.C.

(g) Military Highways.

The Public Works Officer travelled over all the Military Highways in Sicily this month. Their condition is roughly as follows:-

S.S. 113 Trapani, Palermo, Messina. The tract from Trapani to Palermo is in poor condition, needing resurfacing in many parts. Two bridges are under construction and progress is fair.

From Palermo to Messina the road is fair. Where the Highway passes through Termini Imerese it is in a shocking condition and the same applies to the town of Barcellona. The tract from Divieto cross-road to Messina about 14 Km. is also in a very bad state. There are 25 bridges under construction.

Details of progress on each bridge are as under:

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Details of progress on each bridge are as under:

Ponte Canicea.

One arch bridge 20 metres span.
Centering is being erected. Should be finished at the end of September.

Ponte Piano.

6521

One arch bridge 16 metres span.
Should be finished end of September.

Declassified E.O. 12356, Section 3.3/NND No. 785019

Ponte Maccarone.

Centering complete. The work should be finished at the end of September.

Ponte S. Stefano.

5 arch. Bridge.
Centering of three arches complete. Work should be finished at the end of September.

Ponte Ortara.

Three arches of 8 metres span.
The centering is ready. Bridge should be completed before the end of September.

Ponte Petrusa.

Single arch bridge 11 metres span.
The arch is finished. Should be completed the beginning of September.

Ponte Cannato.

Three arches of 11 metres each. The centering is being erected. Should be finished end of September.

Ponte Ceronia.

Seven arches of 11 metres each. The centering of two arches erected and the arches are run. The bridge should be finished at the end of November.

Ponte Bucca.

Three arches. The by-pass is not suitable for the winter. The work proceeding very slowly. A very determined effort will be made to have the work well advanced at the end of September.

Ponte Furiano.

Nine arches of 11 metres each. The work is far behind, and it will not be finished before the end of December.

Ponte Ingranno.

Two arches of 21 metres span. Will be finished about

Declassified E.O. 12356 Section 3.3/NND No. 785019

Three arches of 5 metres span.
The centering is ready. Bridge should be completed before the end of September.

Ponte Patruso.

Single arch bridge 11 metres span.
The arch is finished. Should be completed the beginning of September.

Ponte Cannelo.

Three arches of 11 metres each. The centering is being erected. Should be finished end of September.

Ponte Ceronia.

Seven arches of 11 metres each. The centering of two arches erected and the arches are rum. The bridge should be finished at the end of November.

Ponte Busso.

Three arches. The by-pass is not suitable for the winter. The work proceeding very slowly. A very determined effort will be made to have the work well advanced at the end of September.

Ponte Burrano.

Nine arches of 11 metres each. The work is far behind, and it will not be finished before the end of December.

Ponte Ingenno.

Two arches of 21 metres span. Will be finished about the middle of October.

Ponte Rosmarino.

Centering erected. Work should be finished at the end of September.

Ponte Platani.

Three arches 11.2 metres span. Centering of one arch erected. Should be finished the end of September.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Ponte Zappulla.

Four arches of 12 metres each. The piers and abutments have been constructed. The centering is being erected. Will be finished about the end of October.

Ponte Iannello.

Single arch of 15 metres. The centering is erected. The bridge should be finished before the end September.

Ponte S. Angelo.

Two arches. Centering ready on the ground. Should be finished during September.

Ponte Zappardino.

Bridge finished.

Ponte Provvidenza.

Two arches. The centering is on the ground. Should be finished about the middle of October.

Ponte Mazzara S. Andrea.

Bridge is finished.

Ponte Meri e Mele.

Three-arch bridge. The centering has been erected and the arches are now being run. Should be finished the middle of September.

Ponte Carrigle.

Three-arch bridge. Centering being erected but the work is very far behind. It will be necessary to have the work finished by the first October, and pressure will be put on the contractors. The by-pass is not suitable for the winter.

Ponte Muto.

Tenders have just been invited but as the work would have to be carried out in the wet season, it is proposed not to start the work until the spring of 1945, as there is an excellent temporary bridge which will be capable of carrying all traffic during the winter.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Ponte Zapperdino.

Bridge finished.

Ponte Provvidenza.

Two arches. The centering is on the ground. Should be finished about the middle of October.

Ponte Mezzara S. Andrea.

Bridge is finished.

Ponte Mari e Mola.

Three-arch bridge. The centering has been erected and the arches are now being run. Should be finished the middle of September.

Ponte Carriolo.

Three-arch bridge. Centering being erected but the work is very far behind. It will be necessary to have the work finished by the first October, and pressure will be put on the contractors. The by-pass is not suitable for the winter.

Ponte Muto.

Tenders have just been invited but as the work would have to be carried out in the wet season, it is proposed not to start the work until the spring of 1945, as there is an excellent temporary bridge which will be capable of carrying all traffic during the winter.

Ponte Spedefora.

The work has just been given out. There is a good provisional by-pass.

Ponte Concordia.

Same remarks as apply to Ponte Muto.

Ponte Tonnerazza.

Same remarks as apply to Ponte Mu[illegible] 6320

Declassified E.O. 12356 Section 3.3/NND No. 785019

S.S. 114 Two bridges under construction.

Ponte S. Filippo.

Three arches. Work is proceeding steadily. There is a good by-pass which could be used, if necessary, during the winter.

Ponte Miniscale.

Two arches are complete, and the work should be finished about the middle of September.

All bridges on S.S. 121 have been completed.

(h) Other Highways.

Estimates for repairs to State Roads other than Military Highways have been forwarded to the Ministry of Public Works for approval, and provision of funds.

(i) Public Works.

A list of work approved locally is forwarded as appendix "A" to this report. Expenditure incurred on Public Works for the months of May June & July is attached as Appendix "B".

(j) Electricity.

It is understood that Major Crowther delivered his report for the month directly to the Sub-Commission.

Since taking over responsibility for electricity the writer has had a number of conversations with key-engineers of the Società Generale Elettrica, and he hopes to make a tour of all the plants during next month so that he may be "au fait" with the present position.

(k) Materials.

Sufficient materials are available to carry on the present program of work.

(l) Transport.

This has always been difficult, and continue so.

(m) Special Remarks.

The most important function of this Department is now to see that the bridge reconstruction program is carried through before the rainy season. All efforts will be made

Declassified E.O. 12356 Section 3.3/NND No. 785019

(h) Other Highways.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

(n)

TYPE OF WORK	EXPENDITURE FOR THE MONTHS OF		
	May 1944	June 1944	July 1944
Bridges. Road Resurf. Road Maintenance.	44,618,393	40,074,204	31,878,851
Acqueducts and Water Supply.	1,702,335	1,103,373	1,228,894
Malaria Control.	1,815,709	1,388,954	1,395,080
Sewers	4,464,176	945,929	714,525
Demolitions and Removal of Debris	6,993,225	4,923,297	5,571,375
Schools	2,865,296	3,700,671	1,921,914
Hospitals	1,705,396	2,451,464	1,841,499
Prison and Courts	843,500	372,728	787,932
Buildings	15,819,289	7,134,513	5,228,484
Bldgs Occupied by Allies	997,379	469,011	139,085
Marittime and Light Houses	351,273	328,227	299,651
Arts and Monuments	2,080,222	1,010,978	1,411,407
State Owned Houses	5,132,181	8,548,218	6,705,498
Gas Plant Palermo	350,000	350,000	50,000
Electric Company	1,100,000	1,200,000	1,100,000
TOTAL	90,828,974	74,002,567	60,274,195

Declassified E.O. 12356 Section 3.3/NND No. 784019

Supply.	1,702,335	1,103,373	1,228,694
Malaria Control.	1,815,709	1,388,954	1,395,080
Sewers	4,454,176	946,929	714,525
Demolitions and Removal of Debris	6,993,225	4,923,297	5,571,375
Schools	2,865,296	3,700,671	1,921,914
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Prison and Courts	843,500	372,728	787,932
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Gas Plant Palermo	350,000	350,000	50,000
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TOTAL	90,828,974	74,002,567	60,274,195

6519

Declassified E.O. 12356 Section 3.3/NND No. 785019

11. REGION II (Regional Engineer, Major KNIGHT)

(a) Changes

Work on Highways in Foggia and Campobasso Provinces now comes under direction of Region 2.

Major G. Boucher ceased to control Highways in Foggia Province, and reported back to Rome, for duties elsewhere.
Capt. Lambie remains as Roads Officer working in Foggia Province, and retains his office in Foggia.
Lieut. Butcher, Electric Officer, was recalled for another assignment.

(b) Roads.

In connection with the taking over of Military Highways in Foggia and Campobasso Provinces, there was a conference with Major Newby (S.C. Roads 2 District), Major Boucher, Capt.Lambie and the Genio Civile Eng. Foggia, to decide on the needs in plant & transport for necessary main road work in Foggia Province, in the light of the new reduced programme. (It was decided that additional crushers were required to provide sufficient chippings for the Roads Bovino - District Bdy - Ariano. To do this it was decided to close the Canne Quarry, nr. Canosa & transport the two granulators to a river bed on the Bovino-Ariano road. Contractors SICELP would be instructed to carry this into effect. It was also decided that A.C.C. would take over the work being done by the 334 Wks. Sec. RE. from 15 Km. North of Foggia to Saccione river, and their plant would operate under Gen. Civ. organisation. The plant includes road plant & crushers in the quarry nr. S.Severo, operated by 334 Wks. Sect. Capt. Lambie to see O.C. 334 Wks. Sect. & arrange a date for taking over.

(c) In order to increase the output of chippings for the Foggia-S.Severo & Foggia-Lucera roads, it was decided to bring two W.D. crushers provided by the Army, from Bari to a quarry situated at Montegranata, which had been used by the American Air Force Engineers, who were closing down.

After finishing the Cerignola-Canosa road, which should be the end of August, chippings required for the section of the Foggia-R.Ofanto Rd. from Cerignola-R.Cervaro would be transported from the S.Ferdinando Quarry owned by SICELP in preparation for Seal-Coating.

(d) It was also agreed that the Genio Civile be instructed to take river-bed stone from either the R. Carapelle or Cervaro, & put on to the verges of the Cerignola-Foggia road which were in a bad state, & in view of shortage of

Declassified E.O. 12356 Section 3.3/NND No. 785019

(b) Roads.

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Declassified E.O. 12356 Section 3.3/NND No. 789019

(e) Ortanova-Rivino

This road is no longer required by the Armies. All work has been stopped & contracts cancelled. General maintenance only being carried out.

Route 90 Bdy-Ariano. Patching practically completed. The contract given to the firm of CIAPPARELLI was cancelled on account of prices. The firm SICELP to do the whole section. They have started seal-coating from Ariano, and have completed 5 Km.

(f) Bridges.

Following arrangements were made respecting Bailey and other Bridges in Foggia Province:-

R. Carapelle. It was proposed to erect a Flambo Steel Bridge before the rainy season. The Genio Civile to build a temporary pier in the center, to support the Flambo Bridge.

R. Tortore - MRJ. 0155. Major Newby (S.O. Roads, 2 District) reported that the Bailey Bridge would in all probability have to remain until next summer owing to site difficulties. Genio Civile instructed to prepare a design of a new single-span bridge on new alignment just above present bridge, and if possible to get new acutments built this year.

R.S.J. Bridge S of Tortore. MRJ 0254. The Genio Civile instructed to have this replaced by brick-arch before next winter. Also similarly, a timber bridge over R. Serracapriola. MRH 9561.

(g) Military Highways. (General Progress)

Cerignola-Canosa Resurfacing will be finished on 31 August. This would have finished sooner, but for trouble the contractor had with bitumen. An inspection was made on 10 August to look into the trouble; it was found to be due to incorrect handling by his workmen. On instructions from C.E. 2 District the final sealcoat is to be left till Oct/Nov.

Route 16. Bari-R.Ofanto. Seal-coating of this road from R.Ofanto-Molfetta was completed. C.E. 2 District expressed his satisfaction at the way the work was executed.

Route 98. R.Ofanto-Terlizzi. Work of seal-coating this road has gone satisfactorily, the firm SABBA having completed 12 Km.

Bitonto-S.Palo-Bitetto Provincial Road. This road 11 Km. was seal-coated this month, and first section Bitonto-S.Palo treated with emulsion. The first 1 ½ Km. using an experimental emulsion

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Route 98. R.Ofanto-Terlizzi. Work of seal-coating this road has gone satisfactorily, the firm SABBA having completed 12 Km.

Bitonto-S.Palo-Bitetto Provincial Road. This road 11 Km. was seal-coated this month, and first section Bitonto-S.Palo treated with emulsion. The first 1 ½ Km. using an experimental emulsion (broken down by Olive oil, this at request of C.E.2 District.) It was not a success.

Bitetto-S.Nicandro-Adelfia-Route 100. To be resurfaced water-bound Macadam. The firm S.A.B.B.A started from Bitetto on 9 August, and completed about 3 Km. The firm SASSINELLI started from the Route 100 road towards Adelfia on August 15th, and did 2 Km.

0318

Declassified E.O. 12356 Section 3.3/NND No. 785019

Gravina-Talne. Chippings now being produced at Altamura are being conveyed along this road & also bitumen. The firm ROTUNDI are moving to Gravina to start immediately on seal-coating. This road has been taken off the priority list, but C.E. 2 District is allowing work to proceed.
General maintenance being carried out satisfactorily on remaining roads.

(h) Provincial Roads.

The Provincial engineers are carrying out various works requested by the Military, to Hospitals & Camps, the following being most important:-

(Molfetta road to Military Hospital
(Mollito - Quasani to " "
(Andria roads to " "
(Bari Airport Road.
(Monopoli internal Roads.
(Barletta internal Roads.

(i) Bridges.

The progress on the two Bridges over the river Ofanto on Route 16 W. Barletta and Route 98 W. Canosa is proceeding satisfactorily, the rate of progress being up to schedule.

R. Carvaro. Demolition of piers is making good progress.

Salerno Road Bridge, Route Altamura-Gioia del Colle. Work was started on reconstruction of this bridge, demolition complete, foundations being put in.

Bridges at Gravina, on route 96. Cement has been released this month, and work which was held up for cement has recommenced.

Bridge at Gravina, on Road Gravina-Spinazzola. Opened to traffic this month.

Minervino Bridge. Bridge is now complete except for finishing of parapets; not open to traffic yet.

Bridges in Potenza. Cement has been released this month for these bridges, and work is about to commence on reconstruction.

(j) Quarries.

The Quarry opened up at Altamura at end of last month, & worked by Genio Civile is now working satisfactorily and producing about 60 tons daily. There has been no need to requisition the quarry, the Genio Civile having come to an amicable agreement with the owner to work his quarry on a

Declassified E.O. 12356 Section 3.3/NND No. 768019

(Molfetta road to Military Hospital
(Mellito - Qusani to " "
(Andria roads to " "
(Bari Airport Road.
(Monopoli internal Roads.
(Barletta internal Roads.

(i) Bridges.

The progress on the two Bridges over the river Ofanto on Route 16 W. Barletta and Route 98 W. Venosa is proceeding satisfactorily, the rate of progress being up to schedule.

R. Carraro. Demolition of piers is making good progress.

Canterano Road Bridge, Route Altamura-Gioia del Colle. Work was started on reconstruction of this bridge, demolition complete, foundations being put in.

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Bridge at Gravina, on Road Gravina-Spinazzola. Opened to traffic this month.

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Two Army crushers were transported from Bari to Foggia Province and installed in a quarry at Montegranata. These are producing about 60 tons daily; the chippings to be transported on to the Foggia - S. Severo Road for seal-coating.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(k) Public Works.

No projects were approved this month. Several were submitted, but they were not approved after investigation. Several the Genio Civile were told to resubmit, cutting out certain controlled materials.

(l) Electricity (Rationing)

The peak loads through the month remained steady. The Provincial Commissions are now co-operating better & seem to be screening the application received in a more satisfactory way.

(m) Contracts.

A meeting was arranged at Ariano on 8 August with the firm CIAFFARELLI of Naples to discuss the prices they were asking to do the work on Route 90 from Ariano-the Dist.Bdy. This firm had been brought over from Naples & had already done a certain amount of work.

The prices they asked were considerably higher than those asked by contractors in Bari and Foggia provinces. They were asked to bring an analysis of their prices to the meeting; this they failed to do. They were told their prices were high, in comparison with other contractors. They stated they were not prepared to reduce them, and that they had been given those prices in the Naples area by Region 3.

An analysis, on the spot, did not satisfy the meeting.

In view of the attitude they adopted and the high prices they were asking, and the bad effect it would have on other contractors if their prices were agreed to, it was decided that their contract be cancelled. They were informed, and told to cease work next day. They were informed that their prices would not be accepted for work already executed, and that they would be paid on a figure worked out by the Genio Civile which was considered fair and reasonable. If they decided not accept, then they would have to take the matter up with the Italian Government and ask for an arbitration.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

6317

12. REGION III (Regional Engineer, Lt. Col. HENSLEY)

(a) General Remarks.

It has been reported that the State highway department was unable to pay some of their cantonieri working on jobs ordered by A.C.C. 8th Army, because of lack of funds. This was the result of the closing of accounts by the Finance Officer, 8th Army, leaving work already started, with no funds to back it up.

The state highway department was advised to pay the Cantonieri at once, so that ordinary maintenance would not be held up in any way. In addition to this, the Regional Engineer has discussed with A.C.C. Headquarters the possibility of getting these unfinished jobs properly financed, so that everything can be cleaned up leaving no "loose-ends" dangling.

Procedure for future works has been clearly outlined to the Genio Civile, State highway department and Provincial engineers, emphasizing the fact that no work will be started without full approval of higher headquarters, which will be obtained through channels submitted through this office.

(b) Staff and Personnel.

Military personnel status in this Section has been unchanged for this month. Our civilian personnel, however, has been augmented in both the Section and the Field officer's setup, in order to facilitate the tremendous amount of work required.

(c) Inspection Tours.

Inspection tours were made in both the Salerno and Caserta areas in order to ascertain the condition of the roads and bridges. Bridge work is coming along very well. The road work has been more or less reduced to work of ordinary maintenance. Road gangs have been provided for, cantonieri have been instructed and depending upon the steady flow of materials, this maintenance will be kept up.

Maintenance work has been stressed, emphasized, and pounded into the heads of the Genio Civile and the State Highway department as a necessity, without which any work done, no matter how well executed is a positive waste of time and money.

Maintenance must be constantly carried out; and it must be done when the road is just showing signs of wear and not after it has broken up, beyond ordinary small repairs.

We attach a list of bridges in Salerno & Caserta areas and their percentage of completion.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

0621

Declassified E.O. 12356 Section 3.3/NND No. 785019

(d) ACC/ BRIDGE CONTRACTS - PROGRESS REPORT

ACC Salerno
Bridges on Military Hy's Aug

N.	S.S.P. N.	Name and/or Location	N.R.	Contractor	Date Comm.	Est Date compl.	%	
1	88 I	Fratte River	658338	S.Coreggio	17/4	15/6	100	
2	88 I	Culvert at Km. 3+585	658448					Plans subm
3	88 I	" " " 4+012	656495					
4	88 I	" " " 4+380	656515					
5	88 I	2,1 mi N Faroniasi Ra 11+180	650413					Plans subm
6	88 I	Bridge over R/R Km 11+983	652413					
7	88 I	0,7 mi N Irofiro Km.20+276	646486	Lauʼati	3/7	30/9	35	
8	88 I	Avellino Iridge Km.33+700	668569	Calasso	3/7	15/9	25	
9	18 I	Ponte Sele Km.87+190	861111	Ferrobeton	1/4	15/9	100	PES Job.
10	19 2	Culvert of Eboli Km.9+150	910240	Giantonio	3/7	30/8	70	
11	19 2	" " " 11+500	931232	no	15/5	15/7	100	
12	19 2	Ponte Sele Km.13+350	947222	G. Braca	0	15/0	3	
13	19 2	Ponte Auletta Km. 47+200	208175	Cavaliere	10/4	15/8	100	
14	19 2	Campostrino	240161	no	1/3	15/9	100	
15	19 2	Polla Culvert km.56 + 230	275138	G. Braca	2/6	15/9	30	
16	19 2	Casalnuovo Km. 99+330	450785	Masella	17/7	15/10	15	
17	94 3	Repair Rolling Wall at Sulotta, Km.0+150	208181	Coraggio	2/6	15/9	15	
18	18 I	Ponte Cavr Km. 17 + 100	602326	Campanella & Caputo	1/5	15/0	25	

Declassified E.O. 12356 Section 3.3/NND No. 785019

ACC/ BRIDGE CONTRACTS - PROGRESS REPORT

y's August 1944

ocation	N.R.	Contractor	Date Comm.	Est Date compl.	%	Remarks
	658338	S.Coroggio	17/4	15/6	100	
3+585	658448					Plans submitted 6/6/44 to CE for app.
4+012	656495					DO
4+180	656515					DO
issi Km 11+180	650413					Plans submitted 9/6 to CE III for app.
R Km 11+983	652413					DO
ro Km. 20+276	646486	Lauriati	3/7	30/9	35	
e Km. 33+700	668969	Colasso	3/7	15/9	25	
87+290	861111	Torrobeton	1/4	15/9	100	PES Job.
li Km. 9+150	910240	Giantonio	3/7	30/8	70	
" 11+500	931232	DO	15/5	15/7	100	
13+350	947222	G. Braca	0	15/0	3	
Km. 47+200	208175	Cavaliere	10/4	15/8	100	
	240151	DO	1/3	15/9	100	
Km. 56 + 230	275138	G. Braca	2/6	15/9	30	
99+330	450785	Masella	17/7	15/10	15	
Wall at 150	208181	Coraggio	2/6	15/9	15	
47 + 100	602326	Campanella & Caputo	1/5	15/0	25	

Declassified E.O. 12356 Section 3.3/NND No. 785019

PROGRESS REPORT N. 28

Bridges

(a)

Lab	R.	Location	Map ref.	Contractor	Cost	Start	%	Men	Finish	
(	713	Skew-arch-Quaglione	138570	Campanella	1.090.000	15/4	99.9	0		Needs comp to traffic
			122566	Campanella	2.720.000	29/4	90	47	21.8	Filling ov
2	714	Durlon		Annino	In prepa.	-	-	0		Not approv
3	7	Schito 237 + 850	485715	Cerracchio	1.430.000	15/6	75	34	5.9	Arch compl
4	7	S.Martino 247 + 850	585726	Cerracchio	2.836.000	27/4	58	10	28.9	Ready to c completion
5	7	Cerratella 275 + 100	588725		3.461.000	25/4	50	60	1.10	Arch. fini
6	7	Casa Cant. 250 + 250	598732	Tucci	2.826.000	1/4	98	40	5/9	Filling ov
7	7	Serratella 251 + 750	599747	Tucci						Roman Wall
8	7	Tufariella 252 + 850	605760	Tucci	998.000	1/4	99	0	Fin.	Open to tr complete.
9	7	Corvo 257 + 500	625985	Annino	3.008.000	25/4	90	51	5/9	Filling ov
10	7	Sabato 260 + 500	650808	Campanella	5.350.000	26/6	52	-	1/10	3 arches f
11	7		678315	Campanella	6.200.000	25/4	98/5	15	-	Open, worki
12	Pro	Calore-Benevento		Melchionna	1.640.000	26/4	55	35	1/10	1 arch co
13	7	Tavole 264 + 500	676798	Melchionna	2.710.000	1/4	98.5	16	21/8	Working o
14	7	Mele 273 + 180	169748	Bid being taken		-	-	-	-	Not appro
15	7	Sesa 295 + 500	720660	Campanella	5.186.000	26/4	65	78	1/10	Piers com
16	7	Maretta 297 + 700	716659	Campanella	3.200.000	26/6	15	36	30/10	Piers and
17	7	Tremolisai 300 + 100	711641	Pulese A.	7.540.000	26/6	15	35	15/11	Erecting
18	7	Sabato 301 + 180	705635	Vinciguerra	1.000.000	21/7	7	10	1/12	Preparing Bailey Br
	90	Calore 0 + 00	795928							
				Mascolini	4.500.000	26/6	12	60	1/12	Starting
	90	Deolito 14 + 320	880770	Attena	1.290.000	1/7	45	15	1/10	Half comp
	76	Schiava 56 + 850	585726	Bids being taken						Waiting
	76	Manucci	566570	Bids being taken						
	76	Monteforte	600590							Contract
19	7	Clean of Volturno bed	780780							

Declassified E.O. 12356 Section 3.3/NND No. 785019

PROGRESS REPORT N. 28

August 1944

Bridges

P.	Contractor	Cost	Start	%	Men	Finish	Remarks.
570	Campanella	1.090.000	15/4	99.9	0		Needs completion of parapets open to traffic.
366	Campanella	2.720.000	29/4	90	47	21.8	Filling over arch and parapets.
715	Annino	In prepa.	-	-	0		Not approved.New proposals coming.
726	Cerracchio	1.430.000	15/6	75	34	5.9	Arch complete working on sidewalk.
725	Cerracchio	2.836.000	27/4	58	10	28.9	Ready to open, parapets nearing completion.
732	Tucci	1.461.000	25/4	50	60	1.10	Arch. finished,2 nearly complete.
747	Tucci	2.836.000	1/4	98	40	5/9	Filling over arch, Cantaliver over Roman Wall.
760	Tucci	998.000	1/4	99	0	Fin.	Open to traffic, some parapet to complete.
985	Annino	3.008.000	25/4	90	51	5/9	Filling over arch and sidewalk
808	Campanella	5.350.000	26/6	52	-	1/10	3 arches finished, staging up for 2
315	Campanella	6.200.000	25/4	98/5	15	-	Open,working on parapets and decor
798	Melchionna	1.640.000	26/4	55	35	1/10	1 arch complete, 2 half complete
748	Melchionna	2.740.000	1/4	98.5	16	21/8	Working on parapets.
660	Bid being taken		-	-	-	-	Not approved,alternative proposals
659	Campanella	5.186.000	26/4	65	78	1/10	Piers complete,centering in place
641	Campanella	3.200.000	26/6	15	36	30/10	Piers and both abutments complete
635	Pulese A.	7.510.000	26/6	15	35	15/11	Erecting centering.
928	Vinciguerra	1.000.000	21/7	7	10	1/12	Preparing stone and centering Bailey Bridge ?
770	Nascolini	4.500.000	26/6	12	60	1/12	Starting on firts arch.
726	Attena	1.290.000	1/7	45	15	1/10	Half complete, ready to open.
570	Bids being taken						Waiting estimate
550	Bids being taken						
780							Contract not yet allotted.

(e) Water

The following work has been finished during the month of August.

Repairs of an urgent nature to the Canal bridge at the Torrente di Pennarano. Completed the walls at the Chiaiano pumping station.

Equipment for the hydraulic engines at the Chiaiano station all repaired.

Bolla reservoir repairs are completed.

Started work on the Bolla Aqueduct in the zone outside of Naples.

Set up a new pipeline of 100 mm. at Fuorigrotta to improve water conditions in Rione Scarpati area.

Stone masonry for the pipeline at Piedigrotta, Fuorigrotta for a 300 mm. pipe has been finished.

Various other work done throughout Naples such as bombing repairs and maintenance.

(f) Gas.

There were no mishaps in the gas restoration to that section described in the July monthly report. As soon as the main pipelines are properly repaired with their satellite connection feeding lesser important streets, there will be another extra zone included in the distribution, comprising Via Stella Polare.

The coal situation is normal at the present time. We have just enough in reserve to insure production for 3 months, but we expect new shipments in at any time.

Regular repairs are continuing to the plant itself, in order to get the plant in efficient running condition as far as possible.

(g) Electricity.

Applications	received	476
"	deferred	25
"	approved	279
"	rejected	172

The allocations for the month of August were as follows:

Naples District	14,000,000 KWH
Pomigliano	2,000,000 KWH
S.Maria	1,500,000 KWH
Salerno Torre Castell	8,600,000 KWH

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Salerno Torre Castell	8,600,000 KWH

According to the consumptions to date we may presume as follows:

For Naples District: a consumption of about 300,000 KWH over the allocated amount.

For Pomigliano : a consumption of about 70,000 KWH below the allocated amount.

For S.Maria : a consumption of about 170,000 KWH below the allocated amount

For Salerno Torre Castell. : a consumption of about 650,000 KWH below the allocated amount.

Declassified E.O. 12356 Section 3.3/NND No. 785019

The 5,000 KWH transformer in Torre Annunziata Sub-Station was tested in the first week of August after a few hours of operation it failed. According to the latest reports from Ing. Masturzo the transformer will be ready for testing on or about the last Sunday in August.

(h) Tram

In the City of Naples have been stopped during our peak hours (9 a.m. to 3 p.m.).

(i) City of Naples.

The general condition of the principal streets in the City is good. However, the fact that maintenance during the last four years was completely lacking coupled with the present difficulty in obtaining workmen and materials are the direct cause of imperfections found today. Since the advent of A.C.S. all main roads plus any roads of military value are being kept up in excellent condition. All repairs are executed as to not disturb the flow of traffic. The following work was completed during the month of August, the repairing of:

Large Section in the main road Milano-Agnano.
Complete repair of Via Ponti Rossi and other roads running North and East of Naples.
Repairs to Via Scudillo, Via Manconi, Via Leopardi and Villa Comunale.
About 72,700 square metres of road-work was done for in about 28 different streets; in addition to the regular war-damage repairs which are constantly going on.

Rubbish and debris removal from streets and locations of bombed buildings is going on still. This work will be carried out until all streets are made free of incumbrances. Road repairs are being carried out with a particular regard for those going toward Rome.

Sewer work can now be brought to a finish as we have been able to get cement to complete this work. It is to be noted that the deplorable condition of the sewers in Naples were not principally caused by war damage, but by negligence of the Napolitan officials for over a period of ten years.

Hospital repairs are being carried out. The "Cardinale Ascalesi" Hospital is practically done.

Repairs to 6 workshops in the "Arsenale di Artiglieria" were done, plus the buildings which now house the AMG Courts.

(j) Summary

Declassified E.O. 12356 Section 3.3/NND No. 768049

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Repairs to 8 workshops in the "Arsenale di Artiglieria" were done, plus the buildings which now houses the AMG Courts.

(j) Summary

Labor problems have arisen, with the result that shortlived strikes have cropped up among the personnel of the Naples Public Utilities. Aside from the fact that these strikes have their nuisance value, this section is constantly awaiting the day when, because of these strikes, serious consequences resulting from unattended Public Utility Services, such as gas and electricity primarily will occur.

Declassified E.O. 12356 Section 3.3/NND No. 785019

It is to be pointed out that these agitations and strikes are no new thing, but have been occurring periodically from the first of the year when labor groups were granted the right to organize.

No amount of arbitration, in our opinion answers the direct problem on hand, i.e. the jeopardy of public utilities services. It is needless to point out the serious consequences to property and human lives which can be the direct result of a prolonged strike. In the opinion of this Section this matter should be cleared once and for all, eliminating future danger. At the present writing the Gas Company has just finished striking, the local Power Company employees struck last week, using as an excuse the lack of shoes.

Labor groups should not be allowed to remain in a position where they can coerce the A.C.C. into giving head to their demands by this method.

With regard to tires, tubes, and trucks for the utilities this section would like to point out that they have not received any at all. The situation with regard to these two items is not getting better, it is worse. We have submitted requests for this material time and again through every available channel; with absolutely no results. This Section has arrived at the conclusion that without assistance from H.Q. A.C.C. there will be no tires forthcoming. We cannot emphasize the need for this material strongly enough.

This Section would like to point out that the truck service rendered by the "Consorzio Autotrasporti" is inadequate, in that the trucks themselves are in deplorable condition; they are unreliable for any extended trip whatsoever.

In many cases the trucks break down before the work has started.

Gasoline has been requested through local channels, long detailed, and minute data has been submitted as to each vehicle requirement, whether it be a ten ton truck or a motor-cycle; these same data have been submitted by region, by section, by province, by utility and by contractor, and still gasoline allotments are inadequate. Records are confused with the result that our civilian agencies do not get sufficient gasoline to operate for the month.

We have exhausted our channels of supplies, limited as they were; and this section now indicates that materials requested through the form MAT 10 are very slow in arriving. After a careful check of our records of MAT tens submitted we find that at least a month goes by before we get a written

Declassified E.O. 12356 Section 3.3/NND No. 785019

Labor groups should not be allowed to remain in a position where they can coerce the A.C.C. into giving heed to their demands by this method.

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We have exhausted our channels of supplies, limited as they were; and this section now indicates that materials requested through the form MAT 10 are very slow in arriving. After a careful check of our records of MAT tens submitted we find that at least a month goes by before we get a written answer as to whether the material will be available in the future, or not.

It is pointed out that delays in completion of work in progress invariably result. It is our opinion that an allocation of construction materials could be made on a month to month basis, from which local priorities could be made.

This Section is also interested in knowing what definite plans are outlined for the rehabilitation of key-industries, for which a heavy demand is being made for construction materials.

6514

Declassified E.O. 12356 Section 3.3/NND No. 785019

It is further requested that an operating program be established to rehabilitate plants to produce items now under control of the Armies.

The question of transportation is an ever increasing "bottle neck" and it is the opinion of this section that this condition can be readily remedied by reconstructing equipment now lying idle, if a program of coordinated effort could be received from the numerous parties involved in the operation of the Italian railroad system.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

13. ROME REGION (Lt.Col. BIRCHETT, Engineer Officer).

(a) During the month the Rome Region was consolidated with old Region IV, Lt.Col. Findlay of Region IV was appointed Regional Engineer, and the Rome staff continued to operate under the direction of Lt.Col. Birchett, pending consolidation of the two offices. This consolidation is expected in the near future. In the meantime close coordination of effort is being maintained with the RAAC Engineer group. To avoid confusion until the Rome Region and Region IV offices are consolidated, the section is called TCU Section, Region IV, Engineering Division.

As of 15 August the Region was turned over to the Italian Government. This has made very little change in operation.

(b) Personnel of the former Rome Region is as follows:-

Lt.Col. Birchett	-	Director TCU Section, Engineering Div.
Major Buckley	-	Water Supply, TCU Sec. " "
Major Hawker	-	Telecommunications, TCU Sec. Engr.Div.
Major Michel	-	Public Works Sec. " " " "
Capt. Robb	-	Administrative Off. " " " "
Capt. Rosson	-	Electrical & Mech. " " " "
Lt. Wade-Brown	-	Electrical Section " " " "

(c) Inspection Tours.

Inspection trips have been made on all projects. Those in the city are inspected daily; those in the vicinity weekly.

(d) Military Highways.

Work on all military highways is being prosecuted, using the same contractors reported in August. Contracts have been let thru the Genio Civile and necessary reports and forms forwarded to ACC.

(e) Secondary Highways.

Secondary highways are being given more consideration and work will be prosecuted now that the main routes are in good condition. Streets in Rome City demand attention. Several small bridges are being built in the vicinity of Rome. The values of the road work cannot be stated since it is all heavy maintenance (by cost plus contracts).

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(f) Public Works.

Fiumicino Harbour Project.

Good progress has been made on assemblying the equipment for raising the boats, considering the set-backs and obstacles met that were beyond the jurisdiction and control of the operating Company doing the work, such as transport, gasoline, requisitioning the cars used by their engineers, etc. The Company doing the work has associated with it four other Companies, all of whom have had experience in this type of work. They now

6513

Declassified E.O. 12356 Section 3.3/NND No. 785019

have in operation 3 units for raising boats, in addition to a steam crane and a Diesel power plant mounted on separate barges. 12 barges and boats have been raised to date and 3 more are in process of being raised. They have assured us of an average of one boat every three days from Sept.1 onwards.

Another firm has practically completed removing rubble from the street along the right quay. They have also completed the closing of the largest opening blown in the right quay near the outlet of the canal, with rubble removed from the streets and have placed 150 mc. of concrete blocks as a protection to this fill.

(g) Projects for buildings damaged by bombing.

Activity in this has mainly been confined to repair of hospital buildings and University of Rome buildings. Forty-two projects totalling 72,175,000 Lire have been presented by the Genio Civile's Office. Forty of these projects, totalling 41,175,000 have gone forward from this office approved. Thirty-one of these projects have been started, due to urgent nature of the work.

The S.S.T.T. for Comune of Rome has presented a general program covering 31 bridges totalling 24,000,000 Lire. These are bridges blown by the Germans and replacement is urgently needed on most of them. The S.S.T.T. for the Comune is now preparing projects for the above.

The Genio Civile for the Tevere and Agro Romano has presented 7 projects totalling 6,360,000 Lire for work on main outfall sewers of Rome, the levees along the Tevere below Rome and sewers of the Ostiense area. Work is being done on all these projects because it is necessary to have them under control before fall rains set in.

(h) Some improvement since last month has been made by Nettezza Urbana (street sweeping and garbage removal). However, the services are handicapped by a shortage of petroleum products and tires for the equipment they have in operation; also need for repair parts and tires for equipment now immobilized. The service has provided for special cleaning of several areas of historical-artistic interest. A large number of horse carts and workers have been assigned and kept busy on such special work and cleaning up nuisance, dumping of refuse, most of the latter being done by Army units or different units of our occupational group.

(i) Several of the lesser paving and sewer repairs have been completed. The major paving job, the Via Ostiense area,

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(i) Several of the lesser paving and sewer repairs have been completed. The major paving job, the Via Ostiense area, does not show much progress. Underground work, consisting of several sanitary and storm sewers utilities consisting of gas, water, communications and electric tunnels are nearing completion, and resurfacing will proceed as rapidly as controlled materials such as cement and asphalt become available.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(j) Repairs of damages to road paving caused by war action.

There are 7 schemes of special road and street works in hand, from 20,000 to 100,000 Lire in value.

Other projects regarding similar works in the Nomentana and Monteverde areas (Delegazioni XI and IX) have been submitted to the Genio Civile for approval.

(k) Bridges.

- Bridge across the Almone stream as per No.30 of list: works are under execution (10 workmen).
- Tiro Tacio Bridge - Wks are proceeding (12 workmen).
- Magliana Bridge (n.1 of list) - the offers presented by several contractors are under examination.
- For Bracciano Bridge - the lack of floating craft and other equipments does not enable us to receive offers, while works at Magliana Bridge are under execution.
- Lutacio Catulo concrete bridge (No.10 of the list). The clearance of the river mouth has been effected.

Plans have been completed and submitted for approval relative to bridge access to Castel Fusano park X and bridge over the Arrone stream.

(l) Materials and labor.

Contractor Marchetti & Membrini are awaiting consignments of lime. No alteration in the supply of sand, which is being exhausted. During the week we have had the following work days 1284; carts 170; trucks 36; water tank carts 16; tractors 18.

(m) Electrical services.

- Power production.

Total energy produced by hydro, steam and Diesel installations together with peak power demands are tabulated in exhibit 1. For the month of September the allocation of hydro power to Rome was reduced from 15,500 KW to 8,200 KW by the Local Resources Board. A new peak was reached on August 28 of 43,000 KW, with an energy output of 314,000 KW hrs.

- Fuel.

Coal received by rail at a satisfactory rate, and for

Declassified E.O. 12356 Section 3.3/NND No. 785019

- Tito Tasio Bridge - Wks are proceeding (12 workmen).

- Magliana Bridge (n.1 of list) - the offers presented by several contractors are under examination.

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Total energy produced by hydro, steam and Diesel installations together with peak power demands are tabulated in exhibit 1. For the month of September the allocation of hydro power to Rome was reduced from 15,500 KW to 8,200 KW by the Local Resources Board. A new peak was reached on August 28 of 43,000 KW, with an energy output of 814,000 KW hrs.

- Fuel.

Coal received by rail at a satisfactory rate, and for the month deliveries exceeded consumption with a resulting increase in the stock pile.
Diesel oil deliveries from Naples have not been satisfactory and the POL Section AAI has been asked to arrange for shipments to Rome from Naples by rail. Bids were also submitted to POL Section AAI for boiler fuel oil, to be shipped by rail from Naples.
Additional power will have to be generated in the thermal station, to offset the reduced hydro allocation.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Electricity Rationing.

The rationing plan for non-preferential consumers which became effective on 23 July has been successfully maintained during the month of August. It is not believed possible that this program can be continued during September, unless further restrictions are placed on the use of electricity.

(n) Gas Service.

Distribution of gas was resumed on Tuesday 29 August. Present fuel allocations for gas production amount to 160 tons of gas coal per day and 30 tons of lignite. The Societa Italiana per il Gas estimates that a coal consumption of 150 tons per day will permit daily distribution for 1½ hours at reduced pressure to the entire City.

It is not believed that this limited service will prove satisfactory and it is recommended that beginning on 1st October service be based on a 7 hour schedule of daily distribution. Estimated monthly coal requirement for such operation are 14,400 tons of gas coal and 1,600 tons of Sardinian coal. Bids for this amount have been submitted to the Coal Section - Transportation Division, ACC.

(o) Street Car Service.

The hours of street car operation adopted on August 4 were continued until the end of the month, when a new plan was inaugurated which provides for a reduction of the number of street cars during periods of the day when power demands are greatest, and additional cars during other hours. This plan will result in a slight reduction in the maximum power requirements of the Tram Company with approximately the same consumption of energy.

(p) Industries and factories.

Power is furnished to essential services. Coal is being loaned in small quantities to essential users by this section (from Gas Co. stocks) pending the receiving of coal by the Economics & Supply Division.

(q) Water Works.

Water is still a major problem although it is believed that the main trouble is over. During the month a change-over in the main aqueduct system, the Marcia, was undertaken from

Declassified E.O. 12356 Section 3.3/NND No. 780019

Italiane per il Gas estimates that a coal consumption of 150 tons per day will permit daily distribution for 12 hours at reduced pressure to the entire City.

It is not believed that this limited service will prove satisfactory and it is recommended that beginning on 1st October service be based on a 7 hour schedule of daily distribution. Estimated monthly coal requirement for such operation are 14,400 tons of gas coal and 1,600 tons of Sardinian coal. Bids for this amount have been submitted to the Coal Section - Transportation Division, ACC.

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The hours of street car operation adopted on August 4 were continued until the end of the month, when a new plan was inaugurated which provides for a reduction of the number of street cars during periods of the day when power demands are greatest, and additional cars during other hours. This plan will result in a slight reduction in the maximum power requirements of the Tram Company with approximately the same consumption of energy.

(p) Industries and factories.

Power is furnished to essential services. Coal is being loaned in small quantities to essential users by this section (from Gas Co.stocks) pending the receiving of coal by the Economics & Supply Division.

(q) Water Works.

Water is still a major problem although it is believed that the main trouble is over. During the month a change-over in the main aqueduct system, the Marcia, was undertaken from the temporary wooden ducts to masonry ducts.

The flow of the Marcia aqueduct continued at 3000 litres per second, until 2000 hours 24th August when it fell to 2.700/ lps owing to the shutting down of one aqueduct to remove the temporary diversion and bring back into operation the main aqueduct which had been damaged by the bombs and was now repaired.

This work was carried out by the C.R.E. supplying the compressors, lighting plant, supervision etc. Acqua Marcia

Declassified E.O. 12356 Section 3.3/NND No. 784019

supplying the specialists and men, the work was completed at approximately 0400 hours 25th; washout commenced at 0600 hours and the aqueduct commenced to fill at 10.00 hours 25th; instant pressure began to rise in the late afternoon of 25th.

The arrangements made were as follows: temporary drinking fountains were installed in the district where water would be short; A.G.E.A. Coy arranged to pump into the Marcia system as much water as possible; A.G.E.A. undertook to look after the district where there was not any water at all, i.e. Monte Mario, Madonna del Riposo, by means of mobile water-tanks obtained from the "Autoparco" of the Comune and reserved from special water-points established; the Fire Service were detailed to supply the five or six hospitals that were expected to be short of water.

So far, this added water has had little effect in the city and it is expected that pressures will not build up until probably the end of the month, when the quantity at Tivoli should be 5.000 lps, as against 3.900 lps. on the 24th August.

This will not put an end to water troubles, as most of the high apartments, even in working class quarters, are fitted with electric pumps, and as these function only every fourth day and the cistern capacity is small, we will still have to run the street corner fountains. From public health point of view it would be better to give the same amount of current but for shorter periods, and more often.

(r) A.G.E.A. System continued normally at 2.160 lps. Their pumping stations ran to capacity and supplied to Marcia during the "change over" period an additional quantity of 120 lps.

The OSTIA LIDO branch is still giving trouble. At times there is no water at Ostia.

CIAMPINO - Works on this supply to airports and camps should be completed by the end of the month, as far as the needs of the Army are concerned. The Genio Civile has been requested to prepare a project for civil needs.

GENERAL HOSPITALS and some other additional installations still continue to be supplied by the Fire Service. This will be the case until sufficient quantity and pressure can be obtained in the Marcia system.

The quantity of water, and therefore pressure, is being reduced due to a drying up of springs at the source.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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6511

Declassified E.O. 12356 Section 3.3/NND No. 785019

13 A. REGION IV. (Regional Engineer, Lt.Col. FINDLAY V.C.,M.C.,R.E.)

(a) Organisation.

On 1st August Region IV and ROME Region were combined as Region IV.- The Regional Commissioner agreed that in future the "Engineering Division" would be so entitled. Office accomodation questions have been difficult and continue so. The Division is still located away from Region IV Hqrs.

The Electrical and Mechanical Sections were difficult to organise. Two senior officers were transferred. Their work now devolves on one junior officer.

Public Works (Provinces) continued unchanged except for the addition of roads and bridges, in order to let another officer take over all Military and State Roads.

Highways were taken over by 2 officers, and there were other re-arrangements of duties.

(b) Very close cooperation with Rome Area Allied Command Engineers, almost amounting to a triumvirate at each level. was difficult to change, but with reduction of officers ahead this had to be faced.

It is hoped that it may be possible to continue the friendly relations that have existed, as the willing help offered by Col. Hedding and Lt. Col. Cockerton has been most valuable.

A separate report by Lt. Col. Birchett was submitted dated 4th September, as a handing over report, prior to his departure.

(c) Inspection Tours were limited severely by having only one car.

(d) Highways (Military and State).

In Italian Government Territory

		Lire	
Bridges started	No.19 approx.value	142,000,000)	
Estimates being prepared	No.20	35,000,000) =	
Other works started	No.15	33,000,000)	230,000,000
Under preparation	No. 4	20,000,000)	

In AMG Territory

Bridges started	No. 3	10,000,000)	
	No.15	36,000,000) =	

Declassified E.O. 12356 Section 3.3/NND No. 785019

the addition of roads and [illegible]
officer take over all Military and State Roads.

Highways were taken over by 2 officers, and there were other re-arrangements of duties.

(b) Very close cooperation with Rome Area Allied Command Engineers, almost amounting to a triumvirate at each level, was difficult to change, but with reduction of officers ahead this had to be faced.

It is hoped that it may be possible to continue the friendly relations that have existed, as the willing help offered by Col. Madding and Lt. Col. Cockerton has been most valuable.

A separate report by Lt. Col. Birchett was submitted dated 4th September, as a handing over report, prior to his departure.

(c) Inspection Tours were limited severely by having only one car.

(d) Highways (Military and State).

In Italian Government Territory — Lire

Bridges started	No.19 approx.value	148,000,000)	
Estimates being prepared	No.20	35,000,000) =	
Other works started	No.15	33,000,000)	230,000,000
Under preparation	No. 4	20,000,000)	

In AMG Territory

Bridges started	No. 3	10,000,000)	
Under preparation	No.15	30,000,000) =	
Other works,repairs,etc.	No. 4	8,000,000)	68,000,000
Under preparation	No.10		

Steps have been taken to regularise emergency work previously started, and this has progressed satisfactorily.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(e) Close liaison has been maintained with CRE on Routes 6 and 2.

Owing to many changes of PBS on Route 7 liaison has been more difficult, and the Lt.Col. in charge has his HQ near Naples.

Liaison on Route 1 is also difficult as the Engineer in charge has moved far North (out of the Region).

(f) Mines.

The Italian Mine Clearance Company before leaving on 29th August is now reported to have lifted 1 mine. (The previous report was NIL).

Prior to 1st September there were talks, conferences, and approaches with view to getting civil contracts (and getting civilians trained) but no results achieved as yet.

(g) Bonifica.

Financial objection to the 30,000,000 Lire project for Bonifica in Littoria was waived, and work which had had to be closed down was restarted; but 3 valuable weeks of fine weather had been lost.

(h) Electrical.

During month in Region IV 4 additional generating units were started yielding 4,720 KVA, offset by low water in rivers to drive those already running.

The total energy in the Region (including Rome) is 43,700 KVA which is 5.6% of former total capacity installed. During August 295 km of Distribution lines were repaired.

(i) Transport.

Cars for inspection continue to be most unsatisfactory until tyres can be supplied, and trucks are similarly handicapped.

(j) The Genio Civile are now functioning reasonably well in the Provinces of Region IV with the exception of Perugia, which is still not under the Region, and of which little is known at the moment. Provisional budgets for the period July to September were approved as follows, and the Finance Officer was

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Prior to 1st September there were talks, conferences, and approaches with view to getting civil contracts (and getting civilians trained) but no results achieved as yet.

(g) Bonifica.

Financial objection to the 50,000,000 Lire project for Bonifica in Littoria was waived, and work which had had to be closed down was restarted, but 3 valuable weeks of fine weather had been lost.

(h) Electrical.

During month in Region IV 4 additional generating units were started yielding 4,720 KVA, offset by low water in rivers to drive those already running.

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Roma	105	Million Lire
Frosinone	334	" "
Littoria	130	" "
Perugia	54	" " (interim only)
Rieti	not yet submitted	
Viterbo-Terni	"	" "

From 15th August Rome, Littoria, and Frosinone Provinces passed to the Italian Government, whereupon the Regional

6516

Declassified E.O. 12356 Section 3.3/NND No. 788019

Engineers' function was reduced in many cases to giving only "approval in principle" to projected works in these areas.

(k) Re-housing.

The Regional Engineer views with apprehension, in view of the approaching winter, the slow progress made. He was given to understand that only Government-owned properties might be repaired. Pontecorvo and Cisterna are typical cases of badly damaged, but not totally destroyed towns. He asked the Genio Civile in August to present, as test cases, a scheme covering easily repairable houses in private ownership in each of these towns. The Prefect of the Province would then have power to requisition the repaired houses and would be able to allot accomodation to the best advantage.

(l) Provinces.

In Rieti the principal damage was confined to roads. In Viterbo conditions are not disastrous generally, but the town of that name was extensively damaged. In Terni one bridge scheme has been approved, of local materials, and other bridge projects are held over pending receipt of a priority list. A number of schemes for demolition and debris clearance have been approved. The same applies to Roma Province where works are proceeding satisfactorily. In Littoria the main scheme is the Bonifica. In this Province there are very large numbers of uncleared mines. In Frosinone Province the same mine clearance problem exists, and a scheme to cost nearly 4 Million Lire for Bonifica works cannot be started till the mines are cleared.

(m) Finances of Projects.

In the Italian Government portion (of Region IV) 18 schemes of water supply reconstruction have been approved; value 21 Million Lire. There are also 23 water schemes under preparation to cost 47 Million Lire.

Eight schemes were approved for bridges (of non-Military importance), value 13 Million Lire; and 9 schemes to cost 25 Million Lire are under preparation.

Miscellaneous works approved were 52 at the end of August, with a value of 117 Million Lire; and 9 schemes approved in principle costing over 10 Million Lire.

In A.M.G. Territory similar lists, but on a very much smaller scale, with a gross total of about 28 Million Lire, either approved already or under preparation.

Declassified E.O. 12356 Section 3.3/NND No. 768019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

14. REGION V (Regional Engineer)(Lt. Col. Latimer)

(a) Areas controlled by Region V are as reported last month. Pesaro - Urbino has not yet been occupied. Ancona and Macerata are under the control of 8th Army, and Campobasso although returned to the administration of the Italian Government is still under the administrative control and technical supervision of Region 5.

The area of Region 5 at the present time lies within the 1st and 2nd District Army areas. Recent orders have put 1st Dist. under 8th Army.

(b) Organization.

The following officers are at the present time working with the Public Works and Utilities Divisions of the Regional Engineer Section, Region V.

Lt.Col. C.A. Latimer	(A)	Regional Engineer
Major J.S. Foden	(B)	Public Works Officer
Major John Bennett	(A)	Public Utilities Officers
Lieut. John Walsh	(A)	Public Works Officer

Contemplated personnel changes will necessitate [illegible] organizational changes during next month.

(c) The Provincial Engineer at Teramo has been dismissed by the Prefect and another engineer appointed in his place. Engr Asioli has suspended the Prov. Engr. (Durchio) pending investigation and has appointed the senior member of the Teramo Provincial Engineer Staff in his place. I intend to investigate this personally at the earliest possible date, in company with Eng'r Asioli and possibly Eng. Valerio /If the engineer is at fault I shall approve the dismissal but the new appointment must be from name or names submitted by the Dep't of Public Works/

There have been no other changes in the Italian organization.

(d) Inspection Tours.

The Regional Engineer visited Teramo, Ascoli Piceno, Macerata, Ancona, Pescara, Aquila and Campobasso on inspection trips, besides attending a Provincial Commissioners conference, and discussing engineering problems with them.

(e) Military Roads.(Ref. HQ.AAI.CMF 2078/12 of 17.7.44).

Declassified E.O. 12356 Section 3.3/NND No. 785019

Engineer Section, Region V.

Lt.Col. C.A. Latimer	(A)	Regional Engineer
Major J.E. Fenn	(B)	Public Works Officer
Major John Bennett	(A)	Public Utilities Officers
Lieut. John Walsh	(A)	Public Works Officer

Contemplated personnel changes will necessitate further organizational changes during next month.

(c) The Provincial Engineer at Teramo has been dismissed by the Prefect and another engineer appointed in his place. Engr Asioli has suspended the Prov. Engr. (Turchio) pending investigation and has appointed the senior member of the Teramo Provincial Engineer Staff in his place. I intend to investigate this personally at the earliest possible date, in company with Eng'r Asioli and possibly Eng. Valerio /If the engineer is at fault I shall approve the dismissal but the new appointment must be from name or names submitted by the Dep't of Public Works/

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We note 4-5 Appendix A and will be guided by these instructions, and by Par. 1 of the reference.

There is an activity along route 16, due primarily to an effort to get this very important highway ready for winter use. Bridges are being repaired, or high level diversions constructed (in many cases using Baileys.. This work has been ordered by, and designs approved by Army Engineers. We are watching to see that debris from old bridges are promptly cleared from water-ways.

6509

Declassified E.O. 12356 Section 3.3/NND No. 785019

Route 5-17 from Pescara to Antrodoco is being maintained and improved. Two bridges under reconstruction.

The remainder of this road is being maintained by Cantonieri.

(f) Other Roads.

The Armies removed various Bailey bridges, prior to completion of masonry bridges in hand, and their going has reduced available transportation to a point where public works must pratically come to a standstill unless other arrangements are made. Five bridges were approved for construction and contract. Three others have been approved for forwarding thru Italian channels.

In some Provinces emphasis for construction and repair of roads (other than Military) have been on those leading in from Coastal supply points, and those connecting Aquila (Regional Hqtrs), with the various Provincial capitals and Rome. The roads to Macerata and Ascoli Piceno from Aquila (Via Nos 48 78) with connecting Provincial roads at the lower end are open. The road to Teramo (No 80) is passable for a jeep, but will require about three weeks more for a standard car.

Road No. 17 (Aquila to Isernia) is passable but extremely rough, and is being worked on. Much of this road is being worked on cost-plus contracts, originally let by the CREs. Other parts are being improved by local gangs, under the Cantonieri.

Considerable trouble has been caused by contractors on R'd 82 (working under contracts signed in Rome) coming into Aquila Province and paying higher wages than are authorized in this province, and purchasing materials at higher than ordinary prices. It was understood that these contracts were to have been turned over to Region V, but nothing has yet been done about it.

Road work particularly high-level, all weather diversions is proceeding in the forward areas. Our contacts with District I (Armies) have been most amicable.

(g) Public Works.

Water-supply still heads the list. Plans for reservoirs at Chieti have gone forward for approval, and release of controlled material. Work is proceeding on various other water [illegible] the supply depends upon electricity

Declassified E.O. 12356 Section 3.3/NND No. 748019

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(g) Public Works.

Water-supply still heads the list. Plans for reservoirs at Chieti have gone forward for approval, and release of controlled material. Work is proceeding on various other water supplies. In many cases the supply depends upon electricity to operate pumps. This problem is particularly serious in Aquila, where many villages and towns are without water due to the low and fluctuating voltage of our exceedingly scant supply of power. In most cases, where the problem is one of construction, it is well in hand.

Sewers in Pescara are opened and finally operating.

Small expenditures have been approved for the repair of the "Castle" in Aquila, for use of Italian military authorities.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(h) Electricity.

The power situation in the advance areas of region V is most unsatisfactory, but very little can be done at the present time. The important stations are destroyed or badly damaged and transmission lines are disrupted. Ancona and forward military centres are increasing the demand faster than other sources can be repaired.

700 KW has been alloted Aquila from Ascoli Piceno plants. The province has been subdivided and a study made of essential plants and services. This power has been distributed equably. The U.N.R.R.A. engineer in Aquila is now making a detailed survey of all plants in this Province, with a view to repairing or salvaging equipment or parts.

Work is proceeding on the repairs of a 1000 K.V.A. electric plant at Lama dei Peligni for use in Chieti. The main power line from Lanciano to Pescara is being rebuilt and should be finished in about five weeks. When complete this should ease conditions considerably in this entire area. The transmission line from Chieti to Aquila is being repaired and should be ready by the time Lanciano Pescara line is finished.

(i) Industries.

Several cement plants have been surveyed and requests sent forward for critical materials (mostly belting) in order to get these plants back into production.

An inspection was made of a natural gas plant in the Fucino Lake area near Avezzano, which has escaped damage and arrangements were made for it to have some power in order to operate. Work has started on a transmission line to Scafa San Valentino, to reactivate a large asphalt plant at that place.

(j) Materials.

Instructions for distribution of E.C.I. have been received and studied. It is hoped that this new operation will remove one of the more serious difficulties that we have experienced. Additional transport is urgently needed for public works operation, particularly in Campobasso.

/It is requested that every effort be made to provide required bolts for the cement plant at Bomba/.

Cement requested for bridge construction and [illegible] must be made available

Declassified E.O. 12356 Section 3.3/NND No. 785019

of all plants in this province [illegible]
salvaging equipment or parts.

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(j) Materials.

Instructions for distribution of P.O.L. have been received and studied. It is hoped that this new operation will remove one of the more serious difficulties that we have experienced. Additional transport is urgently needed for Public Works operation, particularly in Campobasso.

/It is requested that every effort be made to provide required belts for the cement plant at Bomba/.

Permit requested for bridge construction and construction of reservoirs at Chieti must be made available immediately, if work is to be done this season, as both these jobs are urgently needed before this winter.

(k) Miscellaneous.

Two small jobs not requiring critical material have been approved for the Ancient Monuments Comm.

6503

Declassified E.O. 12356 Section 3.3/NND No. 785019

15. REGION VI (Regional Engineer, Capt. SMITH S.H.)

(a) General Remarks

No developments have occurred during August. Complaints are being made of lack of progress in reconstruction of buildings in Cagliari, and failure to begin new road, and water supply projects. With the progress of the war, and its increasing distance or appreciation as more Italian soldiers leave Sardinia, more clamor for advantages, personal and public, is rising. The Allied Control Commission is naively expected to cure all ills without regard to war, shipping space, or critical materials.

(b) Staff Changes

Effective 26 Aug, all connection between Transportation and Public Works and Utilities was severed. The present staff of Region VI Public Works and Utilities is:

1. Edward E. SMITH Captain S.H.(A) Regional Engineer
2. Wolf. H. DIGGOE, AUS (A) P.O.L. Supervision
3. V.L. MEUCCI, Capt. Art.(I) Interpreter, Translator
4. G. ARIS, Captain Ptr. (I) P.O.L. Liaison
5. E. MUCELLI, Signorina (I) Typist.

Recent orders which will return Italian officers to their units will, unless suitable civilian interpreter translators may be procured (exceedingly difficult in Sardinia) remove Captains MEUCCI and ARIS. Such result would seriously restrict the activities of the office.

(c) Inspection Trips

Due to the limited staff, no trips of inspection were found possible outside Cagliari.

(d) Military Highways

No changes are noted from the general observations of the July report. Within the City of Cagliari the streets are practically completed.

(e) Secondary and Inter - Communal Highways.

No change from previously reported situation.

(f) Public Works.

Progress is reported on reconstruction of school buildings in Cagliari and the Cagliari Municipio. It seems doubtful that the present rate of progress will permit use of schools under repair at the beginning of the next school

Declassified E.O. 12356 Section 3.3/NND No. 785219

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1. Edward E. SMITH Captain S.R.(A) Regional Engineer
2. Wolg. H. DISCOE, AUS (A) P.O.E. Supervision
3. V.T. MEUCCI, Capt. Art.(I) Interpreter, Translator
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(e) Secondary and Inter - Communal Highways.

No change from previously reported situation.

(f) Public Works.

Progress is reported on reconstruction of school buildings in Cagliari and the Cagliari Municipio. It seems doubtful that the present rate of progress will permit use of schools under repair at the beginning of the next school session. Principal difficulties seem to be lack of reinforcing steel, transportation and skilled labor. A brief list of miscellaneous activities of the Regional Engineer is attached.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(g) Electricity

From 24 July to 24 August the power plants of the Soc. Elet. Sarda produced:

Coghinas	5,356,400	KWH
Tirso	2,007,400	"
S.Caterina	4,015,800	"
Total	11,379,600	"

On 21 August the water elevations of storage reservoirs:

Coghinas	- metres above sea-level	155,43
Tirso	- metres above sea-level	93,60

The S. Caterina plant resumed operation 29 July.

(h) Industry

Difficulties developing at the two ice-plants in Cagliari on account of restriction of water service are being overcome by the use of ground water supplies for compressor cooling, and by providing storage for potable process water.

A comprehensive report of the August activities of the Office in connection with automotive circulation and F.O.L. rationing has been prepared by Mr. Biscoe for transmission to the Economic Section Industry and Commerce Sub-Commission.

(i) Public Utilities other than Electric power.

(1) Water. The water shortage of Cagliari is under control. Continuous liaison between the Regional Engineer, the Allied Garrison Engineer and the Capo Ingegnere of Cagliari has produced results. Further conservation is contemplated as soon as arrangements for expedients are completed, by further reduction in the daily hours of service (since 4/8/44 between 0500 and 2100 hours only).

The Provincial Commissioner of Sassari reports restriction of hours of water service at the City of Sassari. The usual drying up of springs is reported from villages during the period of high temperature and peak consumption. Plans are made to correct several deficient supplies whenever material becomes available.

(j) Drainage

No construction altho plans and estimates are made.

Gas. It is understood that some gas has been manufactured [illegible] Plant. An allotment of imported coal to both

Declassified E.O. 12356 Section 3.3/NND No. 785019

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A comprehensive report of the August activities of the Office in connection with autocentive circulation and F.O.L. rationing has been prepared by Mr. Disque for transmission to the Economic Section Industry and Commerce Sub-Commission.

(i) Public Utilities other than Electric power.

(1) Water. The water shortage of Cagliari is under control. Continuous liaison between the Regional Engineer, the Allied Garrison Engineer and the Capo Ingegnere of Cagliari has produced results. Further conservation is contemplated as soon as arrangements for expedients are completed, by further reduction in the daily hours of service (since 4/8/44 between 0500 and 2100 hours only).

The Provincial Commissioner of Sassari reports restriction of hours of water service at the City of Sassari. The usual drying up of springs is reported from villages during the period of high temperature and peak consumption. Plans are made to correct several deficient supplies whenever material becomes available.

(j) Drainage

No construction although plans and estimates are made.

Gas. It is understood that some gas has been manufactured at the Sassari Plant. An allotment of imported coal to both Sassari and Cagliari plants has been requested. The Gas situation in Cagliari is negative.

Tram service. No change from July situation but early completion of street repairs in Cagliari will permit use of off-street terminal and transfer-point south of Via Roma, and remove pedestrian congestion in Piazza Garibaldi.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Clearance of Cagliari. 70% done.

Fiumendosa Dam. No change.

Materials. No change.

Transport. No change.

(k) Fuel Rationing.

Considerable improvement in allocations control by Italian personnel, and general tightening of the present system has been effected.

(l) Estimates and P.W. Contracts.

No use has been yet made of forms ACC/1 and ACC/2, apparently because no new work is at present being prepared or transferred from previously used forms. Proper instructions have been given to the Provveditore Opere Pubbliche.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(1) Estimates and P.W. Contracts.

No use has been yet made of forms AOO/1 and AOO/2, apparently because no new work is at present being prepared or transferred from previously used forms. Proper instructions have been given to the Provveditore Opere Pubbliche.

Declassified E.O. 12356 Section 3.3/NND No. 785019

16. REGION VII (Regional Engineer - Major CHAMBERLAIN)

(a) Remarks.

In Calabria there has been a major change in the operations of A.C.C. during this month. The entire staff has been reduced to a bare minimum necessary to observe the work of the people. This has called for all officers being recalled, leaving one regional team of some ten officers, which is contemplated to be changed into a provincial team. The Military mission to the XXXI Army Corps was recalled from Catanzaro.

Calabria was changed from control of No.2 district to No. 3 district (Armies).

Engineer C. Nisini has taken over the position as Chief Engineer of Cosenza Province for the Genio Civile. He speaks some English. The Minister of Public Works visited Calabria this month but was ill during his visit and did not confer with our Headquarters. He has ordered the suspension of all national aid to the reconstruction of war-damage to private houses.

(b) Staff and Personnel.

There has been no change in staff and personnel in this Department during this month.

(c) Inspection Tours.

Inspection trips were made to Reggio, Crotone, Cosenza, and Sila this month. These trips were all for the purpose of inspecting roads, public works projects, and for conferences on electrical rationing.

(d) Military Highways and Bridges.

There has been no change in priorities in Military highways in Calabria. Progress on maintenance of roads is not satisfactory, due to lack of transportation and materials. Heavy repairs are being made on 61.5 kilometers of road and ordinary maintenance on 434 kilometers.

The Virtu Bridge will be finished by the end of this month. Five bridges are under construction, the Angitola, Messina, Amato, Petrace and the Bisirico.

Contract was let for the completion of the small bridge and (re) a landslide on the mountain north of Morano Calabria. This is the last contract to be let on bridges of major importance on Military Highways, with the exception of the Busento river bridge in the city of Cosenza. The Petrace, the Messina and the Angitola bridges are being delayed due

Declassified E.O. 12356 Section 3.3/NND No. 748019

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At the end of August the total value of all work on Military highways amounted to L.31.634.000 of which an expenditure of over 10,000,000 has been made.

6506

Declassified E.O. 12356 Section 3.3/NND No. 785019

(e) Other Highways.

Approval has been recommended for L. 975.915 worth of work this month including one bridge, one landslide, and three maintenance and war damage repairs. Bids were taken on two sustaining wall projects. Approval has now been recommended for L.3.030.975 worth of work on non-military highways and roads.

(f) Public Works.

Twenty five projects were recommended for approval in August amounting to L. 3.674.200 including three demolition jobs, two barracks, three prisons, two hospitals, four schools, one sustaining wall, four stream control projects, eight public buildings, and one community slaughter house. This brings the total amount of public works projects recommended for approval to L. 7.076.200.

Work has started on the Gallura prison. The first projects for the placing of the ceilings in the barracks was received on the 24th of August. Bids were taken for five public works projects during this month. No report has been received on the malaria control campaign. Chges were received for the workers and forty cans of Paris green were distributed to each province.

(g) Public Utilities.

Six projects amounting to L. 1.320.812.50 were recommended for approval. These included four projects on the repair of sewers and two on the repair of aqueducts. Contract was let for the sewers in Cntanzaro Marina: cement for this job has been released but has not arrived (at present writing).

(h) Electricity.

The electricity situation in Calabria has been somewhat tense during this month. While putting into force the Decree the rationing of electricity was supplemented by cutting off lines for periods of approximately four hours during the day-time, for various groups of towns at interspersed intervals. Such action resulted in a saving of about 20,000 KWH/day and aided greatly in staying within the Local Resources Board allotment. On 5th of August this was suspended.

The Decree was applied only, and during the course of the month some 400 industrial consumers, 220 electrical appliance users and around 2,600 private light consumers were ordered cut off. All industrial applications were reviewed for the

Declassified E.O. 12356 Section 3.3/NND No. 785019

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The decree was applied only, and during the course of the month some 400 industrial consumers, 220 electrical appliance users and around 2,600 private light consumers were ordered cut off. All industrial applications were reviewed for the Province of Cosenza and Catanzaro and about 40% of those in Reggio Calabria. A survey of private lighting showed about 82% of the customers using over 50% of the amount consumed in 1942. In as much as the cutting off this great number of consumers was not feasible, it was decided to punish the worst violators during the first month, and the examination was made on the following basis:

Declassified E.O. 12356 Section 3.3/NND No. 785019

(a) Customers using less than 5 KWH were not examined.

(b) Customers using in 1944 5 KWH to 9 KWH were allowed 150% of their consumption in 1942.

(c) Customers using in 1944 from 10 to 15 KWH were allowed 100% of their consumption in 1942.

(d) Customers using over 15 KWH were allowed 75% of their consumption in 1944.

Under this basis the number of people affected amounted to about 10% of the customers. By the 21st of the month some 25,300 people had been examined, with 2,600 ordered to be cut off. The cut offs were started and complaints began coming in in great number. The system is slow and cannot be applied all at once.

The consumption of electricity by the "Societa Elettrica Calabria" for the month of July from the Sila plant was 1,900,000 KWH and 1,540,000 KWH. from its own "Centrale". Its consumption for the first 23 days in August from the SME. was 1,980,000 KWH.

The Montecatini plant plans to increase its load about the second week in September. They are now receiving projects from Marcellinara, which allows the production of superphosphate.

(i) Materials.

Cement ordered in June has been released but has not arrived in Calabria. There are three Military highways bridges being held up due to the lack of cement. No bitumen emulsion was received for the Province of Cosenza for highways.

(j) Transport.

The seven Italian Army trucks now working on Military highways are being recalled on the first of September. This leaves no trucks for the Calabrian highways. The situation is very bad, in as much as this affects not only the metalling of the roads, but also the two projects on resurfacing. As yet no arrangements have been made with No. 3 District for other transportation. The Genio Civile at Cosenza has no transport for their engineers and are unable to get out on the job. No tyres have been received for civilians. This lack of transportation is seriously affecting the Public Works program in Calabria.-

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

17. REGION VIII (Regional Engineer, Major LEE, R.E.)

(a) General Remarks.

In consequence of the forward movement of Army boundaries a very considerable extention of activities has taken place during August. This is particularly so in the case of bridge reconstruction and road maintenance, details of which are given below. Work is now being undertaken in Livorno, Pisa, Siena and Arezzo Provinces in addition to the many projects in the Province of Grosseto already reported. The former consists of work allocated by the 5th Army A.M.G., and the British Military units operating in Corps areas, also in No.1 District (Br.) and P.B.S.

(b) Staff and Personnel.

Owing to the fact that Regional H.Q. are not yet at their final location, it has not been possible fully to organise the work of this office, which will have to be done with Italian staff, and as a result considerable pressure of work on the technical officers and skeleton Italian staff has resulted. It is hoped to overcome this shortly, and every endeavour is being made to find suitable candidates for the vacancies by advance inquiries at the final location.

Major Richardson (A) reported for duty 11 Aug.44, and is temporarily detached for duty in Florence.

(c) Highways and Bridges.

After considerable delay due to non-availability of materials etc., work on the bridges over the River ALBINIA on Route 1, and at MANCIANO and PITIGLIANO on Route 74 is now proceeding.

An urgent demand for the reconstruction of the BRUNA road bridge leading to the RIBOLLA coal mine, to take both rail and road traffic was received from A.C.C. H.Q. The work was put in hand with all speed, working day and night shifts, and was completed 26 Aug 44, by the Genio Civile in conjunction with some military labour supplied through 73 CRE. Work was prolonged one day over schedule, owing to the sudden withdrawal of military labour before the completion of the work.

During the latter half of August a large area in rear of the new Army boundary was taken over by C's R.E. working with P.B.S., and No.1 District. Prior to this Chief Engineer (Wks) Rear 8th Army had refused to allow A.M.G. to co-operate on roads, or in fact in any of the usual functions of the Public Works and

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

The position on Route 73 is not yet clear, but it would appear that certain civilian contractors have been given contracts to build bridges and retaining-walls by 8th Army, and that now the units have moved forward, they and the Genio Civile have been told that it is no longer an Army responsibility and that the Genio Civile must take over immediate responsibility for the work. Steps are being taken to obtain a ruling on the matter, and it is presumed that it will become an A.M.G. responsibility, as naturally unless finance is arranged the Genio Civile will not have the necessary funds. It is expected that all will be put in order shortly, but the matter is reported as an indication of the chaos caused by the refusal of 8th Army to accept co-operation.

(d) Public Works.

Works on the rehabilitation of essential services in towns and villages and essential repairs to land drainage, canals etc. is increasing and is now being undertaken in Grosseto, Livorno, Pisa and Siena Provinces.

Works approved to date are as follows: -

Type of work:	No.of contracts:	Estimated cost:
Removal of debris etc.	16	3,355,890
Removal of dangerous walls	13	968,970
Repairs to aqueducts	14	2,685,000
Sewer Repairs	12	2,639,500
Bonifica repairs	3	2,380,000
Canal works	2	913,000
Misc. works	1	698,000
Totals	61	L. 13,968,910

All work is being carried out under the Genio Civile, and the Public Works Officer visits sites as often as possible.

(e) Electricity.

Distribution in Grosseto Province is now under control, and all essential mills etc. are in operation. An additional 500 KW is now being fed from Larderella into the SME northern [illegible] has been received down to Grosseto, and which

Declassified E.O. 12356 Section 3.3/NND No. 785019

that all will be put in order shortly, but the matter is reported as an indication of the chaos caused by the refusal of 8th Army to accept co-operation.

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Distribution in Grosseto Province is now under control, and all essential mills etc. are in operation. An additional 500 KW is now being fed from Larderella into the SMI northern circuit which has been repaired down to Grosseto, and which serves the coal mine at Ribolla and three essential flour mills.

Declassified E.O. 12356 Section 3.3/NND No. 785019

An officer from H.Q. (Major Ball) is now in charge of the rehabilitation of the generating station at Lardarello. One 3000 KW set is in operation in accordance with the arrangements made by this office (see July report) and a second set of like capacity will be ready shortly.

The transmission line Lardarello-Volterra has been repaired and an allocation of 150 KW. was made by P.B.S. through 5th Army AMG which will enable essential services to be put into action. The group of small hydro-plants at COLLE d'ELSA are in operation at reduced output owing to shortage of water. They serve a restricted supply to Siena (mill, hospital etc.) and also for pumping water and running a mill and small industries at Colle. A rationing scheme is being worked out both for Siena and Colle in conjunction with AAI and the PC Siena Province.

(f) Florence.

At the request of 5th Army AMG we are assisting the SCAO Florence by dealing with Public Works matters in the City, and by maintaining contact with the different military units engaged on repairs to essential services. It has also been agreed that this office will arrange to have a survey of the electric consumption and distribution in the city, so that if necessary a rationing scheme can be put into operation when electric power is supplied from the South.

Declassified E.O. 12356 Section 3.3/NND No. 785019

10. REGION IX (Regional Engineer, Major SPANN)

(a) Remarks

Routine activities consisted of general planning in anticipation of the occupation of Region IX. All information that may be of use is being collected and data is compiled in our files. A book on sewers and water installations in Italy was secured from the A.C.C. library in Rome and the chapter on Emilia has been copied for our use.

All maps of the area have been turned over to this division for record and distribution to personnel and provincial officials.

Information is being sought and collated on the locality and productive possibilities of all engineering works, quarries, cement works, etc. capable of being used. A particular study has been made concerning electrical generating and distribution systems.

Studies are being made toward possibilities of the flooding of large areas of lowlyng lands by the enemy, and as much information as possible is being sought covering system and pumping stations in operation. Directives will be prepared for the early location of damaged sluices or blown banks, in order to ascertain the points of ingress of flood waters and to localize their effects. Possibilities and methods of procedure will be studied so that plans can be made for repairs as occasions arise.

Plans are being made for the listing of Contractors and Engineers in the various categories, as rapidly as information is available.

Forms are being studied for the purpose of standardizing data on public works and utilities for record and use. A model form of report has been prepared for use in communes and provinces by officials to be submitted to this office.

(b) Staff and Personnel.

The personnel of this Division at this time is as follows:-

Major W.M. Spann (A)

Major W.H. Gamble (E)

Capt. E.H. Rogers (A)

Pfc. Anthony Campanelli (A)

Capt. Rogers is temporarily attached to A.M.G. 8th Army and is making a study of hydro-electric installations in

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(c) Inspection Tours.

Contacts were made with 8th Army A.M.G., group Capt. Benson, and the Chief Engineer of District 1, Brigadier Lindsay in order to become familiar with procedure of operations and to maintain connection for cooperative activities.

6503

Declassified E.O. 12356 Section 3.3/NND No. 785019

(d) Military Highways.

Designation has been made of Highways Nr. 16 and 9 from Ancona to Bologna for first priority.

(e) Public Works and Utilities.

Plans are in progress to make condition studies on all public works and utilities as soon as possible after we enter the region.

All work will be done in connection with 5th and 8th Army A.M.G. personnel and through liaison personnel connected with District 1 and P.B.S.

(f) General.

Technical personnel from available Italians have been requested for use in securing and compiling data.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

19. REGION XXI (Regional Engineer, Col. EDWARDS).

The Region moved into Chianciano as Region "2" on August 7, 1944.

Capt. E.B. Feldman reported during the month.

Public Works.	}	Material was collected and studied on conditions and installations in the new area.
Public Utilities.		
Highways.		
Communications.		

L.A. JENNY,
Lt-Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

L.A. JENNY,
Lt-Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

CENTRAL ITALY

Report on the availability of electrical energy in Central Italy progressively for the six months ending Feb. 28th 1945.

Also estimated requirements of electrical energy for Military, essential Civilian and factory rehabilitation in Central Italy for the same period.

Prepared by the Electrical Division
Public Works and Utilities Sub-Commission
ALLIED CONTROL COMMISSION
26th August 1944

L.A. JENNY,
Lt.Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

essential Civilian and factory rehabilitation in Central Italy for the same period.

Prepared by the Electrical Division
Public Works and Utilities Sub-Commission
ALLIED CONTROL COMMISSION
26th August 1944

L.A. JENNY,
Lt.Colonel, C.E.,
Director.

W.M. LAPPER,
Lt.Colonel,
Chief Electrical Divn.

6501

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " A "

Summary of Electrical plant and requirements

(1) Showing the demand for electrical energy in Central Italy which will be required for the Months of Sept. to Feb. inclusive for Military and essential civilian needs.

(2) Showing the effective output capacity of the available generating plant in Central Italy for the Months of Sept. 1944 to Feb. 1945 inclusive. This capacity is made up as follows:-

(a) Capacity of plant at present in operation

(b) Additional Capacity from repaired plant

(c) Additional Capacity from Transfer of plant

(d) Additional winter output due to rainfall

(3) The final Line "deficit" indicates the amount of shortage in Kilowatts of output capacity if the factories Listed on Table "C" are put into operation.

TABLE " A "

	1944				1945	
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
	KW	KW	KW	KW	KW	KW
(1) Estimated Demand	136,950	147,900	166,800	184,750	186,250	186,750
(2) Generating Plant Effective Output Capacity	58,000	76,000	88,000	114,000	155,000	154,000
(3) Deficit	78,950	71,900	78,800	70,750	31,250	32,750

Declassified E.O. 12356 Section 3.3/NND No. 785019

Sept. 1944 to Feb. 1945 inclusive. This capacity is made up as follows:-

(a) Capacity of plant at present in operation

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(c) Additional Capacity from Transfer of plant

(d) Additional winter output due to rainfall

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(2) Generating Plant Effective Output Capacity	58,000	76,000	88,000	114,000	155,000	154,000
(3) Deficit	78,950	71,900	78,800	70,750	31,250	32,750

NOTE. Under the output capacity weight has been given to increased availability of water due to rainfall which will fall away beginning in March (see Table "E", page 6)

6500

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

Report on the availability of Electric energy in Central Italy and reduction in generating capacity due to the destruction of plants by the enemy.

(1) The retreating enemy systematically destroyed by mining the Hydro Electric Generating Units, switchgear transformers and auxiliary equipment. This effectively destroyed many of the plants and as care was taken to destroy similar parts in each plant the rehabilitation work is necessarily slowed down. Considerable damage was also done to Transmission Lines and Sub Stations, much copper conductor was taken away and about 60% of the high voltage towers were brought down by mining.

(2) Many castings, forgings and machined parts will have to be made to carry out the repairs. These are in hand and good progress is being made but lack of electric energy for the steelworks and the many Machine Shops which it is desired to operate is causing the repair programme to be delayed.

(3) Out of the sixty important Hydro Electric Stations damaged by the enemy it is only possible to effect repairs to sixteen within the next six months. Of the other forty-four generating Stations thirty are totally destroyed and beyond repair and fourteen can be repaired during the next twelve months.

(4) At the present time there is available only 57,030 KW of output capacity, and this includes about 30,000 KW of steam plant in Rome which was undamaged by the enemy. The summer season output capacity in Central Italy, prior to the damage, was 862,000 KW so that with the present capacity standing at 57,030 KW there is 93% of the plant out of use due to enemy action at the present time.

(5) Briefly, therefore, the present position is as follows.

(a)	Original Summer Output Capacity	862,000	KW
(b)	Present Output Capacity	57,030	KW
(c)	Loss due to enemy action	804,970	KW
(d)	Percentage Loss	93	%

(6) With regard to the rehabilitation programme everything

Declassified E.O. 12356 Section 3.3/NND No. 785019

hydro Electric generating units, switchgear transformers and auxiliary equipment. This effectively destroyed many of the plants and as care was taken to destroy similar parts in each plant the rehabilitation work is necessarily slowed down. Considerable damage was also done to Transmission Lines and Sub Stations, much copper conductor was taken away and about 60% of the high voltage towers were brought down by mining.

(2) Many castings, forgings and machined parts will have to be made to carry out the repairs. These are in hand and good progress is being made but lack of electric energy for the steelworks and the many Machine Shops which it is desired to operate is causing the repair programme to be delayed.

(3) Out of the sixty important hydro Electric Stations damaged by the enemy it is only possible to effect repairs to sixteen within the next six months. Of the other forty-four generating Stations thirty are totally destroyed and beyond repair and fourteen can be repaired during the next twelve months.

(4) At the present time there is available only 57,030 KW of output capacity, and this includes about 30,000 KW of steam plant in Rome which was undamaged by the enemy. The summer season output capacity in Central Italy, prior to the damage, was 862,000 KW so that with the present capacity standing at 57,030 KW there is 93% of the plant out of use due to enemy action at the present time.

(5) Briefly, therefore, the present position is as follows.

(a)	Original Summer Output Capacity	862,000	KW
(b)	Present Output Capacity	57,030	KW
(c)	Loss due to enemy action	804,970	KW
(d)	Percentage loss	93	%

(6) With regard to the rehabilitation programme everything possible is being done to obtain additional output capacity by repairs to demaged plant and by transfer of plants, and the following Tables will show the details of the present generating capacity and the additions which may be expected during the next six months. 6.93

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " E "

7. Showing the output capacity of the Generating Stations operating in connection with the Grid System in Central Italy at 26th August 1944.

Name of Station (1)	Location of Station (2)	Output Capacity at 26th Aug. 44 KW (3)
Terni (Steel)	Terni	550
Terni (old)	Terni	200
Ferindola	Pescara	450
Bolognola	Macerata	700
Carassai	Ascoli P.	450
Pedaso	Ascoli P.	1,100
Altolina	Perugia	600
9 Small Stat.	Umbs	730
Steam (Viscosa)	Rieti	650
Steam & Diesel	Rome	30,000
Vulci	Rome	1,100
Traponzo	Viterbo	550
S.Savino	do	750
Fioritella	do	750
Nera Montoro	Terni	7,850
Vesta	Rome	2,000
Arci	do	1,300
Subiaco	do	2,500
Scalelle	Frosinone	2,100
Comunacqua	do	2,500
Cardinale	Viterbo	40
Forche	do	160
TOTAL Output Capacity		57,030

Declassified E.O. 12356 Section 3.3/NND No. 785019

Name of Station (1)	Location of Station (2)	Output Capacity at 26th Aug. 44 KW (3)
Terni (Steel)	Terni	550
Terni (old)	Terni	200
Ferindola	Pescara	450
Bolognola	Macerata	700
Carassai	Ascoli P.	450
Pedaso	Ascoli P.	1,100
Altolina	Perugia	600
9 Small Stat.	Umes	730
Steam (Viscosa)	Rieti	650
Steam & Diesel	Rome	30,000
Vulci	Rome	1,100
Traponzo	Viterbo	550
S.Sevino	do	750
Fioritella	do	750
Nera Montoro	Terni	7,850
Vesta	Rome	2,000
Arci	do	1,300
Subiaco	do	2,500
Scalelle	Frosinone	2,100
Comunacqua	do	2,500
Cardinale	Viterbo	40
Forche	do	160
TOTAL Output Capacity		57,030

6198

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " C "

6. Showing the output capacity of the Generating Plant connected to the Grid System which is now <u>under repair</u> and the anticipated date of completion.

Name of Station (1)	Location of Station (2)	Output Capacity KW (3)	Anticipated date of Completion (4)
Cervara	Terni	1,600	Aug. 31
Larderello	Pisa	3,000	Aug. 31
Tarquinia Paper Mill	Rome	200	Aug. 31
Terni Plate Mill	Terni	2,000	Aug. 31
Larderello	Pisa	3,000	Sep. 30
Cervara	Terni	1,500	do
Jutificio Terni	Terni	1,100	do
Coprano	Frosinone	9,000	Oct. 31
Cervara	Terni	1,500	do
Farfa II	Rome	4,200	Nov. 15
Cervara	Terni	1,500	Nov. 30
Ponte Fiume	Frosinone	3,200	Nov. 30
Cantorno	Rome	10,000	Dec. 15
Cervara	Terni	1,600	Dec. 31
Galleto	Terni	35,000	Jan. 10
Castel Madama	Rome	4,000	Jan. 31
Mandela	Rome	4,000	do
Cervara	Terni	1,600	Jan. 31
TOTAL Output Capacity		88,300	

Declassified E.O. 12356 Section 3.3/NND No. 785019

(1)	(2)	(3)	(4)
Cervara	Terni	1,600	Aug. 31
Larderello	Pisa	3,000	Aug. 31
Tarquinia Paper Mill	Rome	200	Aug. 31
Terni Plate Mill	Terni	2,000	Aug. 31
Larderello	Pisa	3,000	Sep. 30
Cervara	Terni	1,500	do
Jutificio Terni	Terni	1,100	do
Ceprano	Frosinone	9,000	Oct. 31
Cervara	Terni	1,600	do
Farfa II	Rome	4,200	Nov. 15
Cervara	Terni	1,600	Nov. 30
Ponte Fiume	Frosinone	3,200	Nov. 30
Canterno	Rome	10,000	Dec. 15
Cervara	Terni	1,600	Dec. 31
Galleto	Terni	35,000	Jan. 10
Castel Madama	Rome	4,000	Jan. 31
Mandela	Rome	4,000	do
Cervara	Terni	1,600	Jan. 31
TOTAL Output Capacity		88,300	

6497

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " D "

9. Showing the output capacity of the generating plant which is being moved to assist in the rehabilitation programme.

Name of Station receiving plant (1)	Location of Station (2)	Output Capacity KW (3)	Anticipated date of Completion (4)
Acquoria Vescovali set from Ceprano	Rome	3,500	Dec. 15
Pettorano 2 sets from Carassai	L'Aquila	320	Jan. 10
Molina set from Guglionesi	L'Aquila	250	Jan. 10
Castellano set from Pedaso	Ascoli P.	2,250	Jan. 15
TOTAL Output Capacity		6,320	

In addition to the above programme of plant movement the following arrangements have been made.

CALORE

A 8,000 KW set now being dismantled and repaired will be packed ready for shipment to destination unknown.

MATESE II

The 3,000 KW set brought over from Sicily by A.C.C. will not now be installed. This is being packed ready for shipment to destination unknown.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Acquoria Vescovali set from Ceprano	Rome	3,500	Dec. 15
Pettorano 2 sets from Carassai	L'Aquila	320	Jan. 10
Molina set from Guglionesi	L'Aquila	250	Jan. 10
Castellano set from Padaso	Ascoli P.	2,250	Jan. 15
TOTAL Output Capacity		6,320	

In addition to the above programme of plant movement the following arrangements have been made.

CALORE

A 6,000 KW set now being dismantled and repaired will be packed ready for shipment to destination unknown.

MATESE II

The 3,000 KW set brought over from Sicily by A.C.C. will not now be installed. This is being packed ready for shipment to destination unknown.

6/98

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " E "

10. Showing the output Capacity at present, from repaired plants, by transfer of plants and the additional output to be expected during the winter months due to rainfall.

	Sept. KW	Oct. KW	Nov. KW	Dec. KW	Jan. KW	Feb. KW
Present output Capacity	57,030	57,030	57,030	57,030	57,030	57,030
Output capacity from repaired plants	6,800	18,500	23,100	41,500	78,700	88,300
Output capacity from transfer of plants	--	--	--	3,500	6,320	6,320
Output capacity from increase in water	--	9,000	18,000	25,000	30,000	20,000
TOTAL	63,830	84,530	98,130	127,030	172,050	171,650
Est minimum outage for breakdown and Repairs 10%	6,383	8,453	9,813	12,703	17,205	17,165
Effective output capacity	57,447	76,077	88,317	114,327	154,845	154,485

Declassified E.O. 12356 Section 3.3/NND No. 785019

	KW	KW	KW	KW	KW	KW
Present output Capacity	57,030	57,030	57,030	57,030	57,030	57,030
Output capacity from repaired plants	6,800	18,500	23,100	41,500	76,700	88,300
Output capacity from transfer of plants	--	--	--	3,500	6,320	6,320
Output capacity from increase in water	--	9,000	18,000	25,000	30,000	20,000
TOTAL	63,830	84,530	98,130	127,030	172,050	171,650
Est minimum outage for breakdown and Repairs 10%	6,383	8,453	9,813	12,703	17,205	17,165
Effective output capacity	57,447	76,077	88,317	114,327	154,845	154,485
SAY	58,000	76,000	88,000	114,000	155,000	154,000

Declassified E.O. 12356 Section 3.3/NND No. 785019

11. Electricity requirements in Central Italy for Military and essential Civilian Need.

The total electricity available in Central Italy at the present time is 57,030 KW and this is divided between the various districts as follows.

Rome	Thermal	30,000	KW
	Hydro	8,200	KW
Terni		10,500	KW
Ancona		5,330	KW
Civitavecchia		3,000	KW
		57,030	KW

Dealing with each of these supplies separately and analysing the users of the electricity it is found that:

Rome: The situation in Rome is that the military needs are practically all being met, but that the essential civilian supply is still below requirements.
About 80% of the available energy is used for military and essential civilian services.
Many of the high Buildings depend on electrically driven pumps to lift water to the top flats. These and many small factories, essential to the life of the city, are still without Electricity. It is estimated that a minimum of 10,000 KW of additional energy is required to meet this need.
In addition to this the civilian requirements for lighting of homes and for domestic use are only supplied to the extent of 20% of actual needs and if this is to be ameliorated it is estimated that a further 20,000 KW of energy is required.

Summary for Rome

(a) Military use 30% of Total 11,460 KW

Declassified E.O. 12356 Section 3.3/NND No. 785019

Terni	10,500	KW
Ancona	5,330	KW
Civitavecchia	3,000	KW
	57,030	KW

Dealing with each of these supplies separately and analysing the users of the electricity it is found that:

Rome: The situation in Rome is that the military needs are practically all being met, but that the essential civilian supply is still below requirements.
About 80% of the available energy is used for military and essential civilian services.
Many of the high Buildings depend on electrically driven pumps to lift water to the top flats. These and many small factories, essential to the life of the city, are still without Electricity. It is estimated that a minimum of 10,000 KW of additional energy is required to meet this need.
In addition to this the civilian requirements for lighting of homes and for domestic use are only supplied to the extent of 20% of actual needs and if this is to be ameliorated it is estimated that a further 20,000 KW of energy is required.

Summary for Rome

(a) Military use	30%	of Total	11,460	KW
(b) Essential Civilian	40%	" "	15,280	KW
(c) Tramways classed as Military and essential Civilian	10%	" "	3,820	KW
(d) Civilian use	20%	" 619	7,640	KW
	100%		38,200	KW

Declassified E.O. 12356 Section 3.3/NND No. 785019

Estimated additional Requirements for ROME

	Mil	
(a) Military use	10,000	KW
(b) Essential Civilian	3,000	KW
(c) Tramways	20,000	KW
(d) Civilian use		
Total Estimated additional requirements for Rome	33,000	KW

(If this supply were made available the total Electricity Demand for Rome would be 71,200 KW or approx 70% of the normal requirements at this season. This would fulfil the essential requirements. However, electricity would still have to be strictly rationed)

Terni: Investigation shows 95% of the available energy allocated to this area is taken by the military and essential civilian services. The Military use is for Steelworks, Factories, Hospitals and Billets directly under their control and the essential Civilian needs consist mainly of Water, Sewage, Hospitals, Flour Mills, Bakeries small essential workshops, and limited service of Electric Trams for taking workers to and from factories.

Summary for Terni

(a) Military use	75%	of	Total	7,875 KW
(b) Essential Civilian	15%	"	"	1,575 KW
(c) Tramways classed as Military and essential Civilian	5%	"	"	525 KW
(d) Civilian use	5%	"	"	525 KW
	100%			10,500 KW

Ancona and Civitavecchia:

The Military and essential civilian use of Electricity at these places is similar to Terni and less than 5% is available for civilian use.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(If this supply were ... Electricity Demand for Rome would be 71,200 KW or approx 70% of the normal requirements at this season. This would fulfil the essential requirements. However, electricity would still have to be strictly rationed)

Terni: Investigation shows 95% of the available energy allocated to this area is taken by the military and essential civilian services. The Military use is for Steelworks, Factories, Hospitals and Billets directly under their control and the essential Civilian needs consist mainly of Water, Sewage, Hospitals, Flour Mills, Bakeries small essential workshops, and limited service of Electric Trams for taking workers to and from factories.

Summary for Terni

(a) Military use	75%	of Total	7,875	KW
(b) Essential Civilian	15%	" "	1,575	KW
(c) Tramways classed as Military and essential Civilian	5%	" "	525	KW
	5%	" "	525	KW
(d) Civilian use	100%		10,500	KW

Ancona and Civitavecchia:

The Military and essential civilian use of Electricity at these places is similar to Terni and less than 5% is available for civilian use.

12. The following summary shows at a glance the division of the available electricity which is allocated by the Allied Force Local (Italian) Board, Electrical Committee, to the various districts.

6,93

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " F "

13. Showing the division of the available electricity in Central Italy. The allocation of this energy for the Military and essential civilian services is decided by the Local Resources Italian Board, Electrical Committee, which is composed of representatives of all the military agencies concerned. Strict rationing of the civilian supply is done by A.C.C. in order that Military demands may be met.

District to which the allotment is made	Military use KW	Essential Civilian KW	Civilian KW	Total for District KW
ROME	13,370 (35%)	17,190 (45%)	7,640 (20%)	38,200 (100%)
TERNI	8,090 (77%)	1,890 (18%)	520 (5%)	10,500 (100%)
ANCONA	4,270 (80%)	850 (16%)	210 (4%)	5,330 (100%)
CIVITAVECCHIA	2,400 (80%)	480 (16%)	120 (4%)	3,000 (100%)
TOTAL	28,130 (50%)	20,410 (35%)	8,490 (15%)	57,030 (100%)

Tramway Demand has been divided between Military and

Declassified E.O. 12356 Section 3.3/NND No. 785019

order that Military demands may be met.

District to which the allotment is made	Military use KW	Essential Civilian KW	Civilian KW	Total for District KW
ROME	13,370 (35%)	17,190 (45%)	7,640 (20%)	38,200 (100%)
TERNI	8,090 (77%)	1,890 (18%)	520 (5%)	10,500 (100%)
ANCONA	4,270 (80%)	850 (16%)	210 (4%)	5,330 (100%)
CIVITAVECCHIA	2,400 (80%)	480 (16%)	120 (4%)	3,000 (100%)
TOTAL	28,130 (50%)	20,410 (35%)	8,490 (15%)	57,030 (100%)

Tramway Demand has been divided between Military and essential civilian.

6132

Declassified E.O. 12356 Section 3.3/NND No. 785019

14. Anticipated additional Military Requirements.

The military have already asked for an additional 4,000 KW of demand as soon as this can be made available. Furthermore, they will require further supplies for additional factories and workshops which will be operated under their direction. It is estimated therefore that the military will require an additional 15,000 KW in Central Italy.

15. Anticipated Factory Requirements.

This deals only with the rehabilitation of those specific factories which will assist the war effort and which will in most instances reduce the amount of shipping to this theater of operation.

	Tonnage Produced per Month	Import Tonnage Saved per Month	Kilowatts Required
a) Terni-Nera Montoro Ammonia Works Ammonia is urgently needed for 1) Refrigeration 2) 30 tons per month for Solvay Soda Works at Rosignano 3) Fertilizers	180	560	8,000
b) Aniene Caustic Soda and Chlorine Works At each plant: 1) Rome 2) Rosignano 400 tons caustic soda plus 350 tons chlorine	1,500	1,300	6,500
c) Solvay Soda Works - Rosignano Area 1) San Vincenzo 100 Tons/day Caustic Soda 100 Tons/day	6,000	4,200	500

Declassified E.O. 12356 Section 3.3/NND No. 785019

This deals only with the rehabilitation of those specific factories which will assist the war effort and which will in most instances reduce the amount of shipping to this theater of operation.

	Tonnage Produced per Month	Import Tonnage Saved per Month	Kilowatts Required
a) Terni-Nera Montoro Ammonia Works Ammonia is urgently needed for 1) Refrigeration 2) 30 tons per month for Solvay Soda Works at Rosignano 3) Fertilizers	180	560	8,000
b) Ariene Caustic Soda and Chlorine Works At each plant: 1) Rome 2) Rosignano 400 tons caustic soda plus 350 tons chlorine	1,500	1,300	6,500
c) Solvay Soda Works - Rosignano Area 1) San Vincenzo 100 Tons/day Caustic Soda 2) Ponte Ginori 100 Tons/day Soda Ash	6,000	4,200	500
d) Cisa Viscosa 1) Rieti 2) Rome Fabric for clothing	200	--	1,200
e) Cisa Viscosa Colle Statte Carbon Bisulfide	500	500	3,000

6:97

Declassified E.O. 12356 Section 3.3/NND No. 785019

	Tonnage Produced per Month	Import Tonnage Saved per Month	Kilowatts Required
f) Terni Steel Works			
1) Steel	9,000	9,000	4,000
2) Bosco Terni	500	500	500
g) Folonica			
1) Cast Iron	600	600	400
h) Cement Mills			
1) Colle Ferro)	10,000	7,500	2,500
2) Spoleto)	8,000	8,000	2,000
3) Civitavecchia)	8,000	6,000	2,000
i) Paper Mills			
1) Isola di Liri)			3,000
2) Geprano)			800
3) Tivoli)	350	350	500
4) Roma)			700
j) Mining			
Spoleto Lignite Mines	20,000	20,000	1,200
k) Flour Mills			
	30,000	30,000	4,000
TOTAL	94,830	88,510	40,800

16. From the above analysis of the requirements of a few of the most important factories it will be seen that nearly ninety thousand tons of material can be produced in Italy from local resources and thus save an equivalent amount of shipping now being brought into this theater of operations.

Declassified E.O. 12356 Section 3.3/NND No. 785019

2) Spoleto)	8,000	8,000	2,000
3) Civitavecchia)	8,000	8,000	2,000
i) Paper Mills			
1) Isola di Liri)			3,000
2) Ceprano)			800
3) Tivoli)	350	350	500
4) Rome)			700
j) Mining			
Spoleto Lignite Mines	20,000	20,000	1,200
k) Flour Mills			
	30,000	30,000	4,000
TOTAL	94,830	88,510	40,800

16. From the above analysis of the requirements of a few of the most important factories it will be seen that nearly ninety thousand tons of material can be produced in Italy from local resources and thus save an equivalent amount of shipping now being brought into this theater of operations.

6498

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " G "

17. Summary of future anticipated demand for electric energy for the period 1 September 1944 to 28 February 1945.

Nature of Consumers	Kilowatt Demand	Need
Agriculture	3,600	(a) Essential civilian
Cast Iron Foundry	400	(a) Essential civilian (b) Saves shipping space
Cement Mills	6,500	(a) Military (b) Civilian rehabilitation (c) Saves shipping space
Ceramics and Glass	1,000	(a) Essential civilian
Chemicals	18,000	(a) Essential civilian (b) Saves shipping space
Clothing	200	(a) Essential civilian
Fabric	1,200	(a) Essential civilian
Flour Mills	4,000	(a) Essential civilian
Food (excluding Flour mills)	6,900	(a) Essential civilian
Hemp and Jute	650	(a) Essential civilian
Lumber	4,000	(a) Military (b) Essential civilian
Machinery Manufacturing	3,000	(a) Essential civilian
Military	15,000	(a) Workshops and factories

Declassified E.O. 12356 Section 3.3/NND No. 785019

Agriculture	3,500	(a) Essential civilian
Cast Iron Foundry	400	(a) Essential civilian (b) Saves shipping space
Cement Mills	6,500	(a) Military (b) Civilian rehabilitation (c) Saves shipping space
Ceramics and Glass	1,000	(a) Essential civilian
Chemicals	18,000	(a) Essential civilian (b) Saves shipping space
Clothing	200	(a) Essential civilian
Fabric	1,200	(a) Essential civilian
Flour Mills	4,000	(a) Essential civilian
Food (excluding Flour mills)	6,900	(a) Essential civilian
Hemp and Jute	650	(a) Essential civilian
Lumber	4,000	(a) Military (b) Essential civilian
Machinery Manufacturing	3,000	(a) Essential civilian
Military	15,000	(a) Workshops and factories
Mining	1,200	(a) Military (b) Essential civilian (c) Saves shipping space

6,189

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " G " (Contd.)

Nature of Consumers	Kilowatt Demand	Need
Paper Mills	5,000	(a) Essential civilian (b) Saves shipping
Printing	500	(a) Essential civilian
Public Institutions	6,000	(a) Essential civilian
Railways	15,000	(a) Military (b) Essential civilian
Rome	13,000	(a) Essential civilian
Rome	20,000	(a) Civilian
Steel Plant	4,000	(a) Military (b) Essential civilian (c) Saves shipping space
Steel Fabricators	500	(a) Military (b) Essential civilian
TOTAL	129,650	

Declassified E.O. 12356 Section 3.3/NND No. 785019

Printing	500	(a) Essential civilian
Public Institutions	6,000	(a) Essential civilian
Railways	15,000	(a) Military (b) Essential civilian
Rome	13,000	(a) Essential civilian
Rome	20,000	(a) Civilian
Steel Plant	4,000	(a) Military (b) Essential civilian (c) Saves shipping space
Steel Fabricators	500	(a) Military (b) Essential civilian
TOTAL	129,550	

6488

Declassified E.O. 12356 Section 3.3/NND No. 785019

18. Details are given below on specific plants which would be capable of operating if electricity were available.

TERNI - NERA MONTORO AMMONIA WORKS

Plant Condition:

Good. Capable of limited output.

Product:

Ammonia and compounds. 90 Tons during September - November. 180 Tons during December - February.

Uses:

Essential civilian for

(a) Refrigeration

(b) Solvay Soda plant at Rosignano where caustic soda, soda ash and sodium bicarbonate are produced (Disposition of products of Rosignano plant given later).

(c) Fertilizer. (Four tons of fertilizer can be made from each ton of ammonium sulphate.

Necessary Raw Materials and their Sources:

(a) Coal, either imported or Sardinian.

(b) Pyrites (available in Tuscany)

(c) Limestone (available locally)

ANIENE CAUSTIC SODA and CHLORINE WORKS

Rome Plant

Plant Condition:

Good.

Products:

400 Tons/month Caustic Soda, plus
450 Tons/month of chlorine.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Ammonia and compounds. 90 Tons during September - November. 180 Tons during December - February.

Uses:

Essential civilian for

(a) Refrigeration

(b) Solvay Soda plant at Rosignano where caustic soda, soda ash and sodium bicarbonate are produced (Disposition of products of Rosignano plant given later).

(c) Fertilizer. (Four tons of fertilizer can be made from each ton of ammonium sulphate.

Necessary Raw Materials and their Sources:

(a) Coal, either imported or Sardinian.

(b) Pyrites (available in Tuscany)

(c) Limestone (available locally)

ANIENE CAUSTIC SODA and CHLORINE WORKS

Rome Plant

Plant Condition:

Good.

Products:

400 Tons/month Caustic Soda, plus
350 Tons/month of chlorine.

6187

Declassified E.O. 12356 Section 3.3/NND No. 785019

Uses:

Caustic Soda needed for essential civilian use for

(a) Manufacture of soap

(b) Refining of olive oil

(c) Manufacture of rayon

Chlorine and chlorine products needed for

(a) Water purification

(b) Textile bleaching

Necessary Raw Materials and their Sources:

(a) 200 Tons/Month imported sodium chloride.

(b) Limestone (available locally)

Rosignano Plant.

Plant Condition:

Partially damaged but capable of limited operation.

Products:

450 Tons/Month of Caustic Soda plus
350 Tons/Month of chlorine.

Uses:

Same as products of Rome plant

Necessary Raw Materials and their Sources:

(a) Sodium Chloride (available locally)

(b) Limestone (available locally)

SOLVAY SODA WORKS - ROSIGNANO AREA

Products:

Essential civilian

(a) Caustic Soda) 3000 Tons/Month of each during October and November.
(b) Soda Ash) 6000 Tons/Month during December-February.

Uses:

Declassified E.O. 12356 Section 3.3/NND No. 785019

(b) Textile bleaching

Necessary Raw Materials and their Sources:

(a) 200 Tons/Month imported sodium chloride.

(b) Limestone (available locally)

Rosignano Plant.

Plant Condition:

Partially damaged but capable of limited operation.

Products:

450 Tons/Month of Caustic Soda plus
350 Tons/Month of chlorine.

Uses:

Same as products of Rome plant

Necessary Raw Materials and their Sources:

(a) Sodium Chloride (available locally)

(b) Limestone (available locally)

SOLVAY SODA WORKS - ROSIGNANO AREA

Products:

Essential civilian

(a) Caustic Soda) 3000 Tons/Month of each
) during October and November.
) 6000 Tons/Month during
(b) Soda Ash) December-February.

Uses:

Caustic Soda is used for

(a) Soap manufacture

(b) Olive oil refining

(c) Synthetic Fibers 6486

Declassified E.O. 12356 Section 3.3/NND No. 784019

Uses:

Soda Ash is used for

(a) Glass and Ceramics

(b) Textiles

(c) Paper

(d) Caustic Soda and other chemicals

Necessary Raw Materials and their Sources:

(a) Sodium chloride (available locally)

(b) Limestone (available locally)

(c) Ammonia (available locally)

(d) Coke (from imported coal)
about 1500 Tons of coal per month.

Plant Condition:

Good.

CISA VISCOSA PLANTS AT ROME AND RIETI

Condition of Plants:

Good.

Products:

Rayon (continuous)

Fiocco (staple fiber)

Total production - 200 Tons/Month
beginning 1 November.

Uses:

Essential civilian-clothing

Necessary Raw Materials and their Sources:

(a) Caustic Soda (available locally)

(b) Carbon bisulfide (from Collo Statte plant)

(c) Sulphuric acid (available locally)

(d) Cellulose (must be imported, but some
available for initial operation)
Will have to import one ton of

Declassified E.O. 12356 Section 3.3/NND No. 785019

(b) Limestone (available locally)

(c) Ammonia (available locally)

(d) Coke (from imported coal)
about 1500 Tons of coal per month.

Plant Condition:

Good.

CISA VISCOSA PLANTS AT ROME AND RIETI

Condition of Plants:

Good.

Products:

Rayon (continuous)

Ficoco (staple fiber)

Total production - 200 Tons/Month
beginning 1 November.

Uses:

Essential civilian-clothing

Necessary Raw Materials and their Sources:

(a) Caustic Soda (available locally)

(b) Carbon bisulfide (from Colle Statte plant)

(c) Sulphuric acid (available locally)

(d) Cellulose (must be imported, but some
available for initial operation)
Will have to import one ton of
cellulose per ton of finished product.

6485

Declassified E.O. 12356 Section 3.3/NND No. 748019

CISA VISCOSA - COLLE STATTE

Condition of Plant:

Good.

Product:

Carbon bisulfide, 500 Tons/Month, beginning 1 September.

Uses:

Essential civilian for

(a) Preservation of grain

(b) Extraction of olive oil

(c) Manufacture of synthetic fiber

Necessary Raw Materials and their Sources:

(a) Sulphur (available locally)

(b) Charcoal (available locally)

TERNI STEEL WORKS

Condition of Plant:

Good

Products:

Steel and Iron ingots, steel castings, used in turn to make: Sheets, plate, sections, forgings , locomotive tires, in accordance with the following:

Month	Weight of ingots and castings in tons
Sept.	3,500
Oct.	3,500
Nov.	5,500
Dec.	5,500
Jan.	8,700
Feb.	8,700

Uses:

Military for construction and repairs
Essential civilian for rehabilitation

Declassified E.O. 12356 Section 3.3/NND No. 785019

(a) Preservation of grain

(b) Extraction of olive oil

(c) Manufacture of synthetic fiber

Necessary Raw Materials and their Sources:

(a) Sulphur (available locally)

(b) Charcoal (available locally)

TERNI STEEL WORKS

Condition of Plant:

Good

Products:

Steel and Iron ingots, steel castings, used in turn to make: Sheets, plate, sections, forgings , locomotive tires, in accordance with the following:

Month	Weight of ingots and castings in tons
Sept.	3,500
Oct.	3,500
Nov.	5,500
Dec.	5,500
Jan.	8,700
Feb.	8,700

Uses:

Military for construction and repairs
Essential civilian for rehabilitation of heavy industries, and Electric Power Plants.

6484

Declassified E.O. 12356 Section 3.3/NND No. 785019

Necessary Raw Materials and their Sources:

A large number of locally available raw materials are required. The imported materials necessary are:

(a) Coal 1900 Tons/Month

(b) Chromite 29 Tons/Month

(c) Magnesite 27 Tons/Month

(d) Chamotte 40 Tons/Month

CEMENT MILLS

Condition of Plants:

Generally good.

Uses:

Building material for military purposes, and for essential Civilian rehabilitation.

Product:

Cement in accordance with following:

Month	Weight of Cement in Tons
Sept.	12,000
Oct.	14,000
Nov.	20,000
Dec.	22,000
Jan.	24,000
Feb.	26,000

Necessary Raw Materials and their Sources:

(a) Shale (available locally)

(b) Limestone (available locally)

(c) Refractories (available locally)

(d) Coal (imported for Colle Ferro and Civitavecchia
(1) British or American Coal 3,600 Tons/Month
(2) Sardinian Coal 4,500 Tons/Month

Declassified E.O. 12356 Section 3.3/NND No. 785019

Condition of Plants:

Generally good.

Uses:

Building material for military purposes, and for essential Civilian rehabilitation.

Product:

Cement in accordance with following:

Month	Weight of Cement in Tons
Sept.	12,000
Oct.	14,000
Nov.	20,000
Dec.	22,000
Jan.	24,000
Feb.	25,000

Necessary Raw Materials and their Sources:

(a) Shale (available locally)

(b) Limestone (available locally)

(c) Refractories (available locally)

(d) Coal (imported for Colle Ferro and Civitavecchia
  (1) British or American Coal 3,600 Tons/Month
  (2) Sardinian Coal 4,500 Tons/Month

(e) Coal-Lignite at Spoleto and available.

6/8?

Declassified E.O. 12356 Section 3.3/NND No. 785019

PAPER MILLS

Condition of Plants:

Good.

Products:

350 Tons/Month Newsprint,
beginning 1 September.

Uses:

Publishing

Necessary Raw Materials and their Sources:

(a) Cellulose (produced locally at plants)

(b) Straw (available locally)

(c) Sodium chloride (available locally)

SPOLETO LIGNITE MINE

Mine Condition:

Good.

Product:

Lignite Coal at the following rate:

Month	Tons Produced
Sept.	10,000
Oct.	13,000
Nov.	16,000
Dec.	20,000
Jan.	20,000
Feb.	20,000

Uses:

Production of manufactured gas and
electricity in Rome.
Steam production in industrial plants.

Necessary Raw Materials:

None

Declassified E.O. 12356 Section 3.3/NND No. 785019

Necessary Raw Materials:

(a) Cellulose (produced locally at plants)

(b) Straw (available locally)

(c) Sodium chloride (available locally)

SPOLETO LIGNITE MINE

Mine Condition:

Good.

Product:

Lignite Coal at the following rate:

Month	Tons Produced
Sept.	10,000
Oct.	13,000
Nov.	16,000
Dec.	20,000
Jan.	20,000
Feb.	20,000

Uses:

Production of manufactured gas and electricity in Rome.
Steam production in industrial plants.

Necessary Raw Materials:

None

Declassified E.O. 12356 Section 3.3/NND No. 785019

FLOUR MILLS

Condition of mills:

Good.

Product:

30,000 Tons flour/Month

Uses:

Essential Civilian food

Necessary Raw Materials:

Local wheat

BOSCO TERNI

Condition of Plant:

Good.

Products:

500 Tons/Month
Fabricated steel

Uses:

Military (Bridge material)
Essential Civilian rehabilitation

Necessary Raw Materials:

Scrap steel
Acetylene
Oxygen
Coal (imported) for foundry.

Declassified E.O. 12356 Section 3.3/NND No. 785019

local wheat

BOSCO TERNI

Condition of Plant:

Good.

Products:

500 Tons/Month
Fabricated steel

Uses:

Military (Bridge material)
Essential Civilian rehabilitation

Necessary Raw Materials:

Scrap steel
Acetylene
Oxygen
Coal (imported) for foundry.

6481

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " H "

19. Showing the monthly requirements in Kilowatts for the demands listed in Table "G".

	Sept. KW	Oct. KW	Nov. KW	Dec. KW	Jan. KW	Feb. KW
Terni - Papigno Carbide Works	9,000	12,000	15,000	18,000	18,000	18,000
Terni Nera Montoro Ammonia Works	4,000	4,000	4,000	8,000	8,000	8,000
Aniene Caustic Soda and Chlorine Works (Rome & Rosignano)	6,500	6,500	6,500	6,500	6,500	6,500
Solvay Soda Works	0	250	250	500	500	500
Cisa Viscosa Works at Rome and Rieti	0	0	1,200	1,200	1,200	1,200
Cisa Viscosa Works at Colle Statte	3,000	3,000	3,000	3,000	3,000	3,000
Terni Steel Works	2,000	2,000	3,000	3,000	4,000	4,000
Terni Cast Iron Foundry	400	400	400	400	400	400
Cement Mills						
Colle Ferro	0	0	1,000	1,500	2,000	2,500
Spoleto	1,000	1,500	2,000	2,000	2,000	2,000
Civitavecchia	2,000	2,000	2,000	2,000	2,000	2,000
Bosco Terni	500	500	500	500	500	500

Declassified E.O. 12356 Section 3.3/NND No. 785019

Carbide Works						
Terni Nera Montoro Ammonia Works	4,000	4,000	4,000	8,000	8,000	8,000
Aniene Caustic Soda and Chlorine Works (Rome & Rosignano)	6,500	6,500	6,500	6,500	6,500	6,500
Solvay Soda Works	0	250	250	500	500	500
Cisa Viscosa Works at Rome and Rieti	0	0	1,200	1,200	1,200	1,200
Cisa Viscosa Works at Colle Statte	3,000	3,000	3,000	3,000	3,000	3,000
Terni Steel Works	2,000	2,000	3,000	3,000	4,000	4,000
Terni Cast Iron Foundry	400	400	400	400	400	400
Cement Mills						
Colle Ferro	0	0	1,000	1,500	2,000	2,500
Spoleto	1,000	1,500	2,000	2,000	2,000	2,000
Civitavecchia	2,000	2,000	2,000	2,000	2,000	2,000
Bosco Terni	500	500	500	500	500	500
Paper Mills						
Isola di Liri	1,000	2,000	3,000	3,000	3,000	3,000
Cerrano	800	800	800	800	800	800
Rome	700	700	700	700	700	700
Tivoli	500	500	500	500	500	500

6130

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " H " (Contd.)

	Sept. KW	Oct. KW	Nov. KW	Dec. KW	Jan. KW	Feb. KW
Mining	500	800	1,000	1,200	1,200	1,200
Flour Mills	4,000	4,000	4,000	4,000	4,000	4,000
Military	4,000	8,000	12,000	15,000	15,000	15,000
Rome: Essential) Civilian)	13,000	13,000	13,000	13,000	13,000	13,000
Civilian	10,000	15,000	20,000	20,000	20,000	20,000
Railways	--	--	5,000	15,000	15,000	15,000
Food, excluding flour mills	6,900	6,900	6,900	6,900	6,900	6,900
Public Institutions	6,000	6,000	6,000	6,000	6,000	6,000
Agriculture	3,600	3,600	3,600	3,600	3,600	3,600
Clothing	200	200	200	200	200	200
Printing	500	500	500	500	500	500
Hemp and Jute	650	650	650	650	650	650
Ceramics and Glass	1,000	1,000	1,000	1,000	1,000	1,000
Mechanical	3,000	3,000	3,000	3,000	3,000	3,000
Lumber	4,100	4,100	4,100	4,100	4,100	4,100
Total additional)						

Declassified E.O. 12356 Section 3.3/NND No. 785019

Military	4,000	8,000	12,000	15,000	15,000	15,000
Rome:						
Essential) Civilian)	13,000	13,000	13,000	13,000	13,000	13,000
Civilian	10,000	15,000	20,000	20,000	20,000	20,000
Railways	--	--	5,000	15,000	15,000	15,000
Food, excluding flour mills	6,900	6,900	6,900	6,900	6,900	6,900
Public Institutions	6,000	6,000	6,000	6,000	6,000	6,000
Agriculture	3,600	3,600	3,600	3,600	3,600	3,600
Clothing	200	200	200	200	200	200
Printing	500	500	500	500	500	500
Hemp and Juts	650	650	650	650	650	650
Ceramics and Glass	1,000	1,000	1,000	1,000	1,000	1,000
Mechanical	3,000	3,000	3,000	3,000	3,000	3,000
Lumber	4,100	4,100	4,100	4,100	4,100	4,100
Total additional) needed)	79,950	90,900	109,800	127,750	129,250	129,750
Present Load	57,000	57,000	57,000	57,000	57,000	57,000
Total Demand	136,950	147,900	166,800	184,750	186,250	186,750
Generating Capacity	58,000	76,000	88,000	114,000	155,000	154,000
DEFICIT	78,950	71,900	78,800	70,750	31,250	32,750

G-179

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

Below is given:-

(a) Extract from minutes of Electrical Reconstruction Committee Italy.

(b) Copy of letter from Minister of Public Works.

(a) Resolution.

Having given due consideration to the present electricity supply position, affecting both military and essential civilian needs, and the possibility of early rehabilitation of electrical plant and equipment damaged by war action, this Committee recommends that steps be taken for the early importation of 60,000 KW of electrical generating plants for use in this Theater of Operations. In view of the urgency of the matter it is recommended that floating Power plants, if available, should be provided.

Il Ministro
dei Lavori Pubblici

7 Aug. 1944

No 1099

Lt. Col. L.A. JENNY
Director, Public Works and Utilities
Sub-Commission A.C.C.

SUBJECT: Payment for Electrical Plant.

In view of the very serious shortage of electric power plants in Italy, and the need for importing such plants so as to serve military as well as highly essential civilian needs, the Ministry of Public Works has stated that, if such plants can be imported without delay, the Italian Government will assume the responsibility for:

a) The payment of rental for these plants during military operations, as well as the cost of operation, and

Declassified E.O. 12356 Section 3.3/NND No. 785019

Having given due consideration to the present electricity supply position, affecting both military and essential civilian needs, and the possibility of early rehabilitation of electrical plant and equipment damaged by war action, this Committee recommends that steps be taken for the early importation of 60,000 KW of electrical generating plants for use in this Theater of Operations. In view of the urgency of the matter it is recommended that floating Power plants, if available, should be provided.

Il Ministro
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7 Aug. 1944

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a) The payment of rental for these plants during military operations, as well as the cost of operation, and

b) The ultimate acquisition of these plants after they are no longer needed by the Allied Armed Forces.

6/29

The Italian Government asks that the payment for the ultimate acquisition of such plants be arranged on a long term basis.

THE MINISTER

Signed: Mancini

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

SOUTHERN ITALY

Report on the availability of electrical energy in Southern Italy progressively for the six months ending Feb. 28th 1945.

Also estimated requirements of electrical energy for Military, essential Civilian and factory rehabilitation in Southern Italy for the same period.

Prepared by the Electrical Division
Public Works and Utilities Sub-Commission
ALLIED CONTROL COMMISSION
26th August 1944

L.A. JENNY,
Lt.Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Prepared by the Electrical Division
Public Works and Utilities Sub-Commission
ALLIED CONTROL COMMISSION
25th August 1944

L.A. JENNY,
Lt.Colonel, C.E.,
Director.

W.M. LAPPER,
Lt.Colonel
Chief Electrical Divn.

6477

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

Report on the availability of electric energy in Southern Italy and reduction in generating Capacity due to the destruction of plants by the enemy.

(1) The enemy retreat through Southern Italy was much More rapid than Central Italy. In the first case the conditions were almost always fluid whereas in Central Italy a certain stationary period existed. It is for this reason together with the enemy's greatly improved organisation in demolition squads that the destruction in Southern Italy is considerably less than Central Italy.

(2) In considering the effective capacity of the generating facilities in Southern Italy the following important points should be noted:-

(a) 170,000 KW of the generating capacity is situated in the extreme South. It is known as the Sila Group of Hydro Electric Stations Located in Calabria.

(b) As there are only two high Voltage Transmission lines leading north from the Sila Group, each of 45,000 KW capacity the effective output from the group, apart from Calabria which is fed on a lower voltage system from the same group, is limited to the capacity of these lines and also to the capacity of the Transformers at the Sila Group.

(c) Electricity rationing schemes initiated by A.C.C. and now being handed over to the Italian Government keep the demand within the effective output of the generating plant. This rationing arrangement will have to be maintained until the electrical facilities in Central Italy have been restored and interconnection resumed.

(d) The greatest care is taken to see that the consumption of electricity in the Southern Italy area does not exceed the allowable water flow from the Reservoirs. The A.C.C. Southern Italy Electrical Engineer regulates

Declassified E.O. 12356 Section 3.3/NND No. 785019

almost always fluid whereas in Central Italy a certain stationary period existed. It is for this reason together with the enemy's greatly improved organisation in demolition squads that the destruction in Southern Italy is considerably less than Central Italy.

(2) In considering the effective capacity of the generating facilities in Southern Italy the following important points should be noted:-

(a) 170,000 KW of the generating capacity is situated in the extreme South. It is known as the Sila Group of Hydro Electric Stations Located in Calabria.

(b) As there are only two high Voltage Transmission lines leading north from the Sila Group, each of 45,000 KW capacity the effective output from the group, apart from Calabria which is fed on a lower voltage system from the same group, is limited to the capacity of these lines and also to the capacity of the Transformers at the Sila Group.

(c) Electricity rationing schemes initiated by A.C.C. and now being handed over to the Italian Government keep the demand within the effective output of the generating plant. This rationing arrangement will have to be maintained until the electrical facilities in Central Italy have been restored and interconnection resumed.

(d) The greatest care is taken to see that the consumption of electricity in the Southern Italy area does not exceed the allowable water flow from the Reservoirs. The A.C.C. Southern Italy Electrical Engineer regulates this either by varying the consumption or to a certain extent by the use of the Capuano Steam plant.

6176

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " A "

Summary of Electrical plant and requirements

(1) Total effective output capacity of generating plant in Southern Italy — 142,600 KW

(2) It is anticipated that the above output capacity will be increased during the winter months due to rainfall. (This does not include Sila group which is limited by Transmission Line capacity). — 10,000 KW

(3) The allocation of Electric power is made by the Allied force Local Resources (Italian) Board Electrical Committee to the various districts. The allotment for September being as follows.

TABEL " A"

District	Allotment in Kilowatts
District 1 UNRRA	1,500
District 2 Apulia Lucania	42,000
District 3 Campania	23,100
PRS Naples Santa Maria	33,000
ACC Calabria	11,000
Railways (DGMRS)	10,000

Declassified E.O. 12356 Section 3.3/NND No. 785019

limited by Transmission Line capacity). 10,000 KW

(3) The allocation of Electric power is made by the Allied force Local Resources (Italian) Board Electrical Committee to the various districts. The allotment for September being as follows.

TABEL " A"

District	Allotment in Kilowatts
District 1 UNRRA	1,500
District 2 Apulia Lucania	42,000
District 3 Campania	23,100
PRS Naples Santa Maria	33,000
ACC Calabria	11,000
Railways (DGMRS)	10,000
TOTAL Demand	120,500

It is expected that this demand will increase during the winter months. Table "E" shows the effective output capacity to meet the demand during the months of Sept.1944 to Feb.1945 inclusive. The Italian Government will arrange to ration supplies to keep within this capacity.

= 2 =

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " B "

Showing the output capacity of the Generating Stations operating in connection with the Grid System in Southern Italy at 26th Aug. 1944.

Name of Station (1)	Location of Station (2)	Output Capacity at 26th Aug.44. KW (3)
Sila Group (H)	Calabria	105,000
Tusciano (H)	Salerno	4,200
Tanagro (H)	Salerno	2,200
Matese I (H)	Benevento	5,200
Capuano (S)	Naples	20,000
Volturno (D)	Naples	6,000
TOTAL Output Capacity		142,600

Matese I. Set is at present out of operation due to breakdown of Alternator repair will be completed at end of Sept.

Sila Group. The total Capacity of the Sila Group is 170,000 KW, the effective output however is less due to the following causes.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Station (1)	Station (2)	KW (3)
Sila Group (H)	Calabria	105,000
Tusciano (H)	Salerno	4,200
Tenagro (H)	Salerno	2,200
Matese I (H)	Benevento	5,200
Capuano (S)	Naples	20,000
Volturno (D)	Naples	6,000
TOTAL Output Capacity		142,600

Matese I. Set is at present out of operation due to breakdown of Alternator repair will be completed at end of Sept.

Sila Group. The total Capacity of the Sila Group is 170,000 KW, the effective output however is less due to the following causes.

(a) Plant is run to suit Reservoir capacity
(b) Transmission Line Limitation
(c) Transformer Limitation.

6474

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " C "

Showing the output capacity of the Generating Plant connected to the Grid System which is now under repair and the anticipated date of completion.

Name of Station (1)	Location of Station (2)	Output Capacity KW (3)	Anticipated date of Completion (4)
Capuano Calore Aventino	Naples Avellino Chieti	10,000 5,000 4,200	Nov. Nov. Jan.
TOTAL Output Capacity		19,200	

TABLE " D "

Showing the output capacity of the generating plant which is being moved to assist in the rehabilitation programme.

Name of Station receiving plant (1)	Location of Station (2)	Output Capacity KW (3)	Anticipated date of Completion (4)
Matese II (set from Alto Belice Sicily 3,000 KW)	Benevento	(see Table D page.5. Centrel Italy Report)	
	Campobasso	5,200	Jan.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(1)	(2)	(3)	(4)
Capuano Calore Aventino	Naples Avellino Chieti	10,000 5,000 4,200	Nov. Nov. Jan.
TOTAL Output Capacity		19,200	

TABLE " D "

Showing the output capacity of the generating plant which is being moved to assist in the rehabilitation programme.

Name of Station receiving plant (1)	Location of Station (2)	Output Capacity KW (3)	Anticipated date of Completion (4)
Matese II (set from Alto Belice Sicily 3,000 KW) Lete (set from Matese I 5,200 KW)	Benevento Campobasso	(see Table D page.5. Central Italy Report) 5,200	Jan.
TOTAL Output Capacity		5,200	

6473

Declassified E.O. 12356 Section 3.3/NND No. 785019

TABLE " E "

Showing the output Capacity at present, from repaired plants, by transfer of plants and the additional output to be expected during the winter months due to rainfall.

	Sept. KW	Oct. KW	Nov. KW	Dec. KW	Jan. KW	Feb. KW
Present output Capacity	142,600	142,600	142,600	142,600	142,600	142,600
Output capacity from repaired plants	—	—	15,000	15,000	19,200	19,200
Output capacity from transfer of plants	--	--	--	--	5,200	5,200
Output capacity from increase in water	--	3,000	6,000	8,000	10,000	8,000
TOTAL	142,600	145,600	163,600	165,600	177,000	175,000
Est minimum outage for breakdown and Repairs 10%	14,260	14,560	16,360	16,560	17,700	17,500
Effective output capacity	128,340	131,040	147,240	149,040	159,300	157,500

Declassified E.O. 12356 Section 3.3/NND No. 785019

Output capacity from repaired plants	--	--	15,000	15,000	19,200	19,200
Output capacity from transfer of plants	--	--	--	--	5,200	5,200
Output capacity from increase in water	--	3,000	6,000	8,000	10,000	8,000
TOTAL	142,600	145,600	163,600	165,600	177,000	175,000
Est minimum outage for breakdown and Repairs 10%	14,260	14,560	16,360	16,560	17,700	17,500
Effective output capacity	128,340	131,040	147,240	149,040	159,300	157,500
SAY	128,000	131,000	147,000	149,000	159,000	158,000

6472

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 759019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

SUBJECT: SUMMARY OF ACTIVITIES DURING JULY 1944. 10 August 1944

1. RE-ORGANIZATION. (Remarks)

(a). The June report of this Sub-Commission, para.1 (sub-paras.i to vi), set out in detail the complete re-organization of its Engineering Staff and their respective responsibilities. Reasons were given for the more or less separate and independent organizations for the carrying out of engineering work that had been set up at the end of 1943 and in the early part of 1944, together with reasons why unification and integration of all activities could be better carried out under a senior engineer officer in each region, designated the Regional Engineer. The change came into operation on the 19th June, and the month of July served to demonstrate its soundness. In particular, elimination in the detailed work that had to be dealt with at H.Q. in previous months (often by senior officers) has been marked. More frequent tours of inspection on the part of the four senior officers as H.Q. should be possible but up to the end of July, at any rate, such tours were exceedingly difficult to arrange. During a part of the month, the Deputy-Director of the Sub-Commission (Lt. Col. G. E. Rhodes, R.E.) was absent from duty through illness; secondly, there was transfer of the office to a new location (Naples to Rome); and, thirdly, many immediate and pressing problems in Rome and its vicinity presented themselves.

The new Minister of Public Works appointed in June, Sig. Mancini, kept in close touch with the Director, and the mild comments and criticisms made about him in the June report (para.1) may perhaps now be modified to some extent, since a better knowledge of the working of his own Department has certainly resulted in quicker and more appropriate action by him in specified directions. There is now no intention to establish the "Superior Technical Council" there mentioned, and neither is there any intention to alter the status and position of Sig. Tiscano, the present Director General. He has also sent out some useful and strong Directives to his Staff.

(b) Personnel.

Para.2 of this report gives lists of officers as on 31 July 1944, together with comments indicating transfers or alterations contemplated. Portion A shows the U.S. list, whilst portion B gives the Regional lists. The numbers shown are 27 and 43 respectively, giving a total of 60 at the end of the month. The total establishment should be 74. Personnel and staffing questions have taken up an increasingly large amount of time, due not only to the rapid moves of the armies (advance planning of new regions) but also to major changes in policy (laid down by higher authority).

The re-posting of officers from Southern Regions to field areas in the North is sometimes made more difficult by the fact that as soon as news of the change is received, there may be a protest from higher ranking officers on the spot. [illegible] of this: (1) Capt. Pelavin, transfer from Region III;

set up at the end of 1943 and in the early part of 1944, [illegible] why unification and integration of all activities could be better carried out under a senior engineer officer in each region, designated the Regional Engineer. The change came into operation on the 15th June, and the month of July served to demonstrate its soundness. In particular, diminution in the detailed work that had to be dealt with at H.Q. in previous months (often by senior officers) has been marked. More frequent tours of inspection on the part of the four senior officers at H.Q. should be possible but up to the end of July, at any rate, such tours were exceedingly difficult to arrange. During a part of the month, the Deputy-Director of the Sub-Commission (Lt. Col. G. E. Rhodes, R.E.) was absent from duty through illness; secondly, there was transfer of the office to a new location (Naples to Rome); and, thirdly, many immediate and pressing problems in Rome and its vicinity presented themselves.

The new Minister of Public Works appointed in June, Sig. Mancini, kept in close touch with the Director, and the mild comments and criticisms made about him in the June report (para.1) may perhaps now be modified to some extent, since a better knowledge of the working of his own Department has certainly resulted in quicker and more appropriate action by him in specified directions. There is now no intention to establish the "Superior Technical Council" there mentioned, and neither is there any intention to alter the status and position of Sig. Tiveano, the present Director General. He has also sent out some useful and strong Directives to his Staff.

(b) Personnel.

Para.2 of this report gives lists of officers as on 31 July 1944, together with comments indicating transfers or alterations contemplated. Portion A shows the H.Q. list, whilst portion B gives the Regional lists. The numbers shown are 17 and 45 respectively, giving a total of 60 at the end of the month. The total establishment should be 74. Personnel and staffing questions have taken up an increasingly large amount of time, due not only to the rapid moves of the Armies (advance planning of new regions) but also to major changes in policy (laid down by higher authority).

The re-posting of officers from Southern Regions to field areas in the North is sometimes made more difficult by the fact that as soon as news of the change is received, there may be a protest from higher ranking officers on the spot. To take only 3 examples of this: (1) Capt. Feldman, transfer from Region III; protest from the Chief Engineer(Armies) of No.3 District C.M.P. (2) Lt. Butcher, from Region II; protest from Regional Commissioner, (3) Major Spann, from Region VI; serious evidence from Regional Commissioner. (4) Maj. Crowther from Region I, protest from Regional Commissioner.

In the case of Region VI, in fact, the only other Public Works officer had been posted to other and quite different duties without consultation with the Sub-Commission some time previously, and he was not immediately available, therefore, to take Major Spann's place.

(c) In short, compliance with the dictates of an ever-changing policy, administrative and geographical changes in the Regions, and the demands of the forward

Declassified E.O. 12356 Section 3.3/NND No. 784019

Northern Regions for a competent Public Works staff adequate in numbers has constituted, and still does constitute, an almost insoluble problem. The number of engineer officers available was barely sufficient to cover the Southern part of Italy and the Islands even a few months ago. More perusal of those monthly reports (in sequence) proves to demonstrate that in this short time duties devolving on the Sub-Commission, as a whole, have increased by probably 1000%. The only possible alleviation or solution would appear to be amalgamation of the Southern Regions, as indeed is now contemplated, handing over to Italian agency a largely increased measure of responsibility engineering and technical (with which is also closely associated financial responsibility), and by leaving to the few Public Works officers still remaining a diminishing responsibility for what is going on, viz.- in proportion to the greatly extended areas they will have to cover, albeit in a mainly advisory and supervisory capacity. In some parts of Italy, borrowing a nautical phrase, the crew must cease to run the ship, and they must be reduced to a mere "care and maintenance party."

(4) The demand for additional officers for the forward areas is insistent and continuous. On 28 June, for example, the Executive Commissioner (Brig.Lush) on returning from a visit to the 5th and 8th Armies and Region VIII, wrote to the effect that there is a "universal demand for the immediate despatch of electrical engineers to Numbers 5 and 8, in order to re-establish hydro-electric systems."

2. Nominal Roll of Officers.

(A) At Headquarters, and on temporary duty elsewhere:-

Lt. Col. L. A. Jenny, C.E.	(A) Director, Sub-Commission
Lt. Col. G. E. Rhodes, R.E.	(A) Deputy Director, Sub-Commission

Public Works Division.

Lt. Col. V. S. Thompson, R.C.E.	(B) Chief, Public Works Div.
1st Lt. R. W. Shepherd	(A) Asst. to Chief P.W. Div.
Major N. W. Hyland	(A) P.W.O. South.
Major C. L. Wade	(A) P.W.O. North.

Utilities & Adm. Div.

Lt. Col. W. M. Lapper	(B) Chief, Utilities & Adm.Div.
Capt. L. W. Laughlin	(A) Asst. to Chief, Util. & Adm. Div.
Major H. W. Westwood	(B) Headquarters.
Capt. A. E. Preedy	(B) Headquarters.
Major M. O. Wooster	(A) Elec. Util. O. Operations.
Major E. J. Bolay	(A) " " " Generation.
Major V. S. Renton	(A) " " " Transmission.
Capt. H. J. Deason	(A) T/D Region IV.
Capt. R. A. Ryan	(A) Elect. Util.Officer. South
Major H. Larson	(A) T/D Region IV
Major R. A. Bell	(A) Elect. Util. Officer

(B) On present information and subject to correction the following Public Works Officers are permanently assigned to Regions as shown:

Region I.	Lt. Col. C. P. Bolick	(A) Regional Engineer Officer.
	Major D. A. Boyd	(B) Public Works Officer.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(d) The demand for additional officers for the forward areas is insistent and continuous. On 28 June, for example, the Executive Commissioner (Brig.Lush) on returning from a visit to the 5th and 8th Armies and Region VIII, wrote to the effect that there is a "universal demand for the immediate despatch of electrical engineers to Numbers 5 and 8, in order to re-establish hydro-electric systems."

2. Nominal Roll of Officers.

(A) At Headquarters, and on temporary duty elsewhere:-

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Public Works Division.

Lt. Col. V. S. Thompson, R.C.E.	(B) Chief, Public Works Div.
1st Lt. R. W. Shepherd	(A) Asst. to Chief P.W. Div.
Major N. W. Hyland	(A) P.W.O. South.
Major C. L. Wade	(A) P.W.O. North.

Utilities & Adm. Div.

Lt. Col. W. M. Lapper	(B) Chief, Utilities & Adm.Div.
Capt. L. W. Laughlin	(A) Asst. to Chief, Util. & Adm. Div.
Major H. W. Westwood	(B) Headquarters.
Capt. A. E. Preedy	(B) Headquarters.
Major M. O. Wooster	(A) Elec. Util. O. Operations.
Major E. J. Drury	(A) " " " Generation.
Major V. S. Ronton	(A) " " " Transmission.
Capt. H. J. Dawson	(A) T/D Region IV.
Capt. R. A. Ryan	(A) Elect. Util.Officer. South
Major H. Larson	(A) T/D Region IV
Major R. A. Bell	(A) Elect. Util. Officer

(B) On present information and subject to correction the following Public Works Officers are permanently assigned to Regions as shown:

Region I.	Lt. Col. C. P. Bolick	(A) Regional Engineer Officer.
	Major D. A. Boyd	(B) Public Works Officer.
	Major A. Crowther	(B) Elec. Util. Officer.
	Major W. H. Gamble	(B) Highways.
Region II	Major W. Knight	(B) Regional Engineer Officer.
	Lt. J. W. L. Butcher	(B) Elec. Util. Officer
	Lt. F. M. H. Stephens	(B) T/D Highways.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Region III.	Lt. Col. L. J. Hemaley	(A)	Regional Engineer Officer.
	Major L. E. Denning	(B)	Public Works Officer.
	Capt. R. F. Wescar	(A)	Highways.
	Capt. R. N. J. Hibbard	(B)	Highways.
	Capt. E. B. Feldman	(A)	Highways.
	Capt. A. G. A. Saul	(B)	Highways.
	1st Lt. P. A. Sbrolla	(A)	Elec. Util.Officer.
Region IV.	Col. I. J. Edwards	(B)	Regional Engineer Officer.
	Lt. Col. G. de G.E.Findlay	(B)	Public Works Officer.
	Major L. G. Evans	(B)	Public Works Officer.
	Capt. T. P. Spriggs	(A)	Public Works Officer.
	Capt. J.S.C.Wilson-Heathcote	(B)	Public Works Officer.
	Lt.Col. J. E. Breth	(A)	Elect. Util. Officer.
	Capt. P. D. Daly	(A)	Elect. Util. Officer.
	Major A. G. Dorley	(B)	Highways.
	Capt. T. E. Bromilee	(A)	Highways.
	Capt. W. R. Gentry	(A)	Highways.
Base Region.	Lt.Col. C. R. Birchett	(A)	Engineer Officer.
	Major A. E. Michel	(A)	Public Works Officer.
	Major G. P. Buckley	(B)	Public Works Officer.
	Major J. C. Rively	(A)	Public Works Officer.
	Lt. E. P. Wade-Brown	(B)	Elect. Util. Officer.
Region V.	Lt.Col. C. A. Latimer	(A)	Regional Engineer Officer.
	Major J. E. Fedan	(B)	Public Works Officer.
	1st Lt. J. H. Walsh	(A)	Public Works Officer.
	Major J. S. Bennett	(B)	Elect. Util. Officer.
	Major G. Doucher	(B)	Highways.
	Capt. J. L. Loubie	(B)	Foggia & Campobasso Prov.
	Capt. R. M. Walker	(B)	Highways.
Region VI.	Capt. E. E. Smith	(A)	Public Works Officer.
Region VII.	Major W. F. Chamberlin	(A)	Regional Engineer Officer.
Region VIII.	Major P. S. L. Lee	(B)	Regional Engineer Officer.
	Capt. P.F.C. Stephens	(B)	Elect. Util. Officer.
	Lt. L. J. Hodges	(B)	P. W. Officer.
Region IX.	Major W. M. Spann	(A)	Regional Engineer Officer.
	Capt. E. H. Rogers	(A)	Elect. Util. Officer.

Remarks:

(a)	Capt. D. M. Gaither	(A)	Assigned to A.M.G. 5th Army.
(b)	Major W. M. Spann	(A)	Assigned to Region IX as Regional Engr.
(c)	Lieut.C'W.Atkins	(B)	Assigned to Staff Economic Sect.
(d)	Capt.W.R.Gentry	(A)	Assigned to Region IV as Highways Officer.
(e)	Capt.E.H.Rogers	(A)	Assigned to Region IX as Elec.Util.Officer.
(f)	Lieut.F.M.H.Stephens	(B)	Assigned to H.Q.,A.C.C.Public Works & Util.

Declassified E.O. 12356 Section 3.3/NND No. 785019

	Heathcote	(B)	Public Works Officer.
	Lt.Col. J. Z. Breth	(A)	Elect. Util. Officer.
	Capt. P. D. Kely	(A)	Elect. Util. Officer.
	Major A. G. Parley	(B)	Highways.
	Capt. D. R. Brownlee	(A)	Highways.
	Capt. W. R. Gentry	(A)	Highways.
Rome Region.	Lt.Col. C. R. Birchett	(A)	Engineer Officer.
	Major A. E. Michel	(A)	Public Works Officer.
	Major C. P. Buckley	(B)	Public Works Officer.
	Major J. C. Rively	(A)	Public Works Officer.
	Lt. E. P. Wade-Brown	(B)	Elect. Util. Officer.
Region V.	Lt.Col. C. A. Latimer	(A)	Regional Engineer Officer.
	Major J. B. Foden	(B)	Public Works Officer.
	1st Lt. J. H. Walsh	(A)	Public Works Officer.
	Major J. S. Bennett	(B)	Elect. Util. Officer.
	Major C. Boucher	(B)	Highways.
	Capt. J. L. Lambie	(B)	Foggia & Campobasso Prov.
	Capt. R. M. Walker	(B)	Highways.
Region VI.	Capt. E. E. Smith	(A)	Public Works Officer.
Region VII.	Major W. T. Chamberlin	(A)	Regional Engineer Officer.
Region VIII.	Major P. S. L. Lee	(B)	Regional Engineer Officer.
	Capt. P.E.C. Stephens	(B)	Elect. Util. Officer.
	Lt. L. J. Hodges	(B)	P. W. Officer.
Region IX.	Major J. M. Spann	(A)	Regional Engineer Officer.
	Capt. E. H. Rogers	(A)	Elect. Util. Officer.

Remarks:

(a)	Capt. D. M. Gaither	(1)	Assigned to A.M.G. 5th Army.
(b)	Major W. M. Spann.	(A)	Assigned to Region IX as Regional Engr.
(c)	Lieut.C'W.Atkins	(B)	Assigned to Staff Economic Sect.
(d)	Capt.W.R.Gentry	(A)	Assigned to Region IV as Highways Officer.
(e)	Capt.E.H.Rogers	(A)	Assigned to Region IX as Elec.Util.Officer.
(f)	Lieut.F.M.H.Stephens	(B)	Assigned to H.Q.A.C.C.Public Works & Utili. and placed on temporary duty Region II as Highways Officer.

6170

Declassified E.O. 12356 Section 3.3/NND No. 784019

1. Meetings and Conferences.

There were many conferences with the Minister (Sig.Bonomi) and with the Director General of Public Works (Sig.Tiburzi) during the month. Some principal points dealt with were the following:-

(a) Short go of hours worked at the chief Offices of the Genio Civile in Rome, viz, between 8.30 AM and about 1.30 PM (a similar system obtained in Naples and was the cause of occasional difficulties). Arrangements now made for at least a nucleus staff, with responsibility, to remain on duty till 5 PM daily.

Incidentally this kind of thing,so difficult for us to understand, is a root cause of frequent failure on the Italian side to " get things done". With a higher supervisory staff working such short hours it is easy to understand that their example is followed by many others,in lower grades. The net result is curtailment of effort and output, and little progress. We would have thought with the country in its present condition, and as it has been for a long time past, that hours of work might have been usefully extended. It has been pointed out more than once that this Sub-Commission only achieves results by, and through Italian executive agency. If this is weak and ineffective, or does not work reasonably hard, then those results will be the less, in direct proportion.

(b) Very little work was found in hand on the Pontine Marshes (anti-malarial measures) in the first week of July. The Director General of the Ministry was instructed to arrange for a considerable labor force immediately.

As to the financing of this, estimated at over 40 M.L., the A.C.C. Finance Officer with the Ministry of Finance refused approval. Both the Agriculture Sub-Commission and the Malaria Control Branch of the Public Health Sub-Commission consider these works (clearing of obstructions in channels etc. making diversions and other things) to be absolutely essential. The matter has therefore been taken up specially with the Finance Sub-Commission in discussion and by letter. However, after a month's delay up to this writing, no approval has been received as yet.

NOTE:- On 6 Aug. PHB (A.C.C.) in a news summary stated:-

> "Owing to the flooding of the Pontine Marshes and the shortage of quinine, the first cases of pernicious malaria have been reported in Rome". (see also para.11 (c) of this report.)

(c) Re-arrangements of responsibilities and duties of Genio Civile officials as between certain provinces in Region IV and V were recommended i.c. to the Director General.

(d) Further, he was advised to put Italian engineers of considerable experience in general charge of the country as divided into 3 areas, South Italy to include Regions 1, 2, 3 and 7; Central Italy, Region 4 including Rome, 5, 6 and 8; and North Italy, Regions 9, 10, 11 and 12. These engineers will be designated "Directors" and will be responsible directly to Sig. Tiburzi. The Compartimento Engineers will continue to be called "Inspectors General".

(e) Inspections and surveys by the Genio Civile superior staff being dependent entirely on transport facilities, the Minister was again pressed (as had repeatedly happened in the last few months) to go ahead with the requisitioning of civilian

Declassified E.O. 12356 Section 3.3/NND No. 759019

[illegible] that their example is followed by many others, in lower grades. The net result is curtailment of effort and output, and little progress. No would have thought with the country in its present condition, and as it has been for a long time past, that hours of work might have been nearly doubled. It has been pointed out more than once that this Sub-Commission only achieves results by, and through Italian executive agency. If this is weak and ineffective, or does not work reasonably hard, then those results will be the less, in direct proportion.

(b) Very little work was found in hand on the Pontine Marshes (anti-malarial measures), in the first week of July. The Director General of the Ministry was instructed to arrange for a considerable labor force immediately.

As to the financing of this, estimated at over 40 M.L., the A.C.C. Finance Officer with the Ministry of Finance refused approval. Both the Agriculture Sub-Commission and the Malaria Control Branch of the Public Health Sub-Commission consider these works (clearing of obstructions in channels etc. making diversions and other things) to be absolutely essential. The matter has therefore been taken up specially with the Finance Sub-Commission in discussion and by letter. However, after 1 month's delay up to this writing, no approval has been received as yet.

NOTE:- On 6 Aug. PAB (A.C.C.) in a news summary stated:-

"Owing to the flooding of the Pontine Marshes and the shortage of quinine, the first cases of pernicious malaria have been reported in Rome". (See also para. 11 (c) of this report.)

(c) Re-arrangements of responsibilities and duties of Genio Civile officials as between certain provinces in Region IV and V were recommended i.a. to the Director General.

(d) Further, he was advised to put Italian engineers of considerable experience in general charge of the country as divided into 3 areas, South Italy to include Regions 1, 2, 3 and 7; Central Italy, Region 4 including Rome, 5, 6 and 8; and North Italy, Regions 9, 10, 11 and 12. These engineers will be designated "Directors" and will be responsible directly to Sig. Tiberne. The Compartimento Engineers will continue to be called "Inspectors General".

(e) Inspections and surveys by the Genio Civile superior staff being dependant entirely on transport facilities, the Minister was again pressed (as had repeatedly happened in the last few months) to go ahead with the requisitioning of civilian cars for the purpose, especially in view of the considerable number of them now available in Rome.

(f) The Minister was reminded about the Town Planning position in its relation to war damage. As to this, reference should be made to the general report of this Sub-Commission para.5 (ix) where the matter was fully discussed. In the result plans have now been received of Naples, Matera and Reggio (Calabria).

(h) Estimates of expenditure were asked for covering 3 months for the operation of garage serving cars and trucks used extensively (on military highways work). This will probably be debited against the 600,000,000 lire fund that was established some months ago.

Declassified E.O. 12356 Section 3.3/NND No. 789019

(i) He was instructed to organise an Area records of the materials, transport and so on, that has been and is being furnished by the Allied Armies for the needs of his Department, so as to avoid differences and misunderstandings after the war.

(j) Under "Denazification" the Minister was reminded of the recent Decree and informed of definite steps he must now take, in conformity with the Instructions issued to this and all other Sub-Commissions. Continuous pressure will be applied in this direction.

(k) The Ministry was found to be doing little or nothing, in the way of planning, and above all discussion with them, as the rehabilitation of electric power plants; a need which is perhaps more important than any. Lastly, public utilities generally and other things also need careful consideration. Instructions given that coordinated plans will be prepared and a regulated system of financing, in conjunction with the Italian Finance Ministry.

(l) Attempts were made to clear up a chaotic condition that had arisen in various places through non-payment of the wages of "Benemerenti" gangs. Also concerning the dismissal of some of them without good reason.

(m) Reconnaissances by the Sub-Commission have indicated particularly difficult road and bridge conditions between Sulmona and Guardiagrele and the towns of Orte and Norcsina. The Director General was told to take instant and urgent action.

(n) Lists of equipment required for various harbours in Central and South Italy were again asked for, this request having been previously made on numerous occasions in the last few months.

(o) Lists of firms and contractors who had collaborated with the Germans (24 in number in Rome) were handed to the Minister on 19 July.

The first meeting of Regional Engineers was held at Naples on 12 June and the second at Rome on 21 July 1944.

A summary of the various Regional Engineers' reports is given herewith in annex. 9 et seq. The second meeting was even more useful than the first, since it followed several weeks' experience of the working of the new organisation. Questions of policy and procedure were settled and numerous questions of detail.

4. Miscellaneous Matters.

(a) Cost of War Damage (Repairs).

Considerable work was done (end of July) in the preparation of a very approximate estimate expressed in dollars of the expenditure Italy may have to incur, by way of reconstruction and rehabilitation, within the first 12 months after termination of the war. The results were set out in detail in a letter to the Vice-President, Economic Section, dated 5 August and it is sufficient here to give merely the gross totals, viz. south of the Pisa-Rimini line 1051 and north of that line 1653 (millions of dollars). The total thus stands at 2704 millions of dollars of which the cost of imported plant and materials may amount to 943, and the local cost (Italian)

Declassified E.O. 12356 Section 3.3/NND No. 785019

plans will be prepared under a reorganized system of financing, in conformity with the Italian Finance Ministry.

(l) Attempts were made to clear up a chaotic condition that had arisen in various places through non-payment of the wages of "Cantonieri" gangs. Also concerning the dismissal of some of them without good reason.

(m) Reconnaissances by the Sub-Commission have indicated particularly difficult road and bridge conditions between Subiaco and Cerreto and the towns of Cave and Nerosino. The Director General was told to take instant and urgent action.

(n) Lists of equipment required for various harbors in Central and South Italy were again asked for, this request having been previously made on numerous occasions in the last few months.

(o) Lists of firms and contractors who had collaborated with the Germans (24 in number in Rome) were handed to the Minister on 19 July.

The first meeting of Regional Engineers was held at Naples on 12 June and the second at Rome on 24 July 1944.

A summary of the various Regional Engineers' reports is given herewith in terms. 9 et seq. The second meeting was even more useful than the first, since it followed several weeks' experience of the working of the new organization. Questions of policy and procedure were settled and numerous questions of detail.

4. Miscellaneous Matters.

(a) Cost of War Damage (Repairs).

Considerable work was done (end of July) in the preparation of a very approximate estimate expressed in dollars of the expenditure Italy may have to incur, by way of reconstruction and rehabilitation, within the first 12 months after termination of the war. The results were set out in detail in a letter to the Vice-President, Economic Section, dated 5 August and it is sufficient here to give merely the gross totals, viz. south of the Pisa-Rimini line 1051 and north of that line 1643 (millions of dollars). The total thus stands at 2704 millions of dollars of which the cost of imported plant and materials may amount to 943, and the local cost (Italian) 1761 millions of dollars. Needless to say, these figures are dependent on wide-ranging assumptions, e.g. the damage the Germans are likely to inflict in North Italy before their final evacuation, and on several others.

(b) Electric Power (destruction)

Damage to electric power facilities in South Italy was severe, but fortunately the largest hydro-electric development there was unharmed. [illegible] and northward, deliberate destruction became more methodical and [illegible]. This matter was referred to in Para. 7 of the June report where a short tabular statement was given of approximate averages concerning war damages to different classes of electric works. That statement can now be supplemented by a more specific example.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Within the areas of Regions IV, V and VIII (A.C.C.) only a very small fraction of the power facilities so far inspected are found to be usable. The position at the end of July appeared to be that electricity requirements for essential needs (see Appx I: 1), might be of the order of 700 million KWH. The maximum possible power that can be generated, after some repairs, seems to be only about 100,000 KWH. Thus, 6/7ths of the plant is destroyed.

(c) A.A.S.S. (Dissolution)

Reference has been made in previous reports of the suppression of the A.A.S.S. (recalled), a Fascist creation, and its amalgamation with the Genio Civile as one organisation. A Decree was received from the Minister at the end of July outlining his scheme to bring this about, set out in technical and legal terminology. It seems at last that this change is really about to take place. It is one that the Sub-Commission has pressed for for a considerable time, not on political grounds, but on grounds of plain convenience, better organisation and expediency.

(d) Planning.(policy)

The Sub-Commission pointed out in a letter 15 July 1944 (to Economic Section) that, following A.F.H.Q. directives, the A.C.C. was not to engage in long term planning, but to concentrate its efforts on first aid projects which could be executed in a short time. However, industries cannot be started even on a most limited scale in a country like Italy, dependent almost wholly on electricity, unless and until electric power plants are themselves first "rehabilitated". Such power stations, whether hydro or steam-driven, have been damaged or completely wrecked on the scale above indicated. It is not possible, by any means or methods known to engineering science, to put these plants again into operation with "first aid repairs". The work must be embarked on to the extent of 90 or 100%. Otherwise one may as well leave it completely alone. Rehabilitation of power plants as a whole in South, Central and North Italy may take each from 1 to 3 years. Finally, the Sub-Commission has asked for guidance, the matter being of absolutely over-riding importance to the immediate future of Italy. If industries cannot be re-started, unemployment will increase, the country will become poorer and poorer; and Allied shipping will be needed to bring in imports, for which Italy will not be able to pay. Electricity, for power purposes, is the "key".

(e) Salvage of ships. (Refer to March report para 12(c), and later months).

This operation (mainly sunken ships in harbour) was being organised by this Sub-Commission, corresponding to standard practice of the Italian Public Works Dept., when after a reference of the whole matter to the Commander-in-Chief, Mediterranean Station through the Naval Sub-Comm., we were instructed to take no further action.

On 10 July the C. in C. notified that all Royal Naval Salvage personnel and resources are being withdrawn from Sicily and from the "toe" of Italy, and asked A.C.C. (this S.C.) to resume activity. He is delegating authority for the commercial salvage of Italian vessels (not Allied) in E. Sicily and in Calabria. An Admiralty Memorandum M.C.C. 43 of 27 Feb.44 is to be strictly adhered to.

NOTE: We received no order. We were asked - since we had shown an interest - "Would we resume?". We answered "yes" - if then will issue to us instruc-

Declassified E.O. 12356 Section 3.3/NND No. 785019

but on grounds of [illegible] conveniences, better organization and expediency.

(d) Planning. (Policy)

The Sub-Commission pointed out in a letter 15 July 1944 (to Economic Section) that, following A.F.H.Q. directives, the A.C.C. was not to engage in long term planning but to concentrate its efforts on first aid projects which could be executed in a short time. However, industries cannot be started even on a most limited scale in a country like Italy, dependent almost wholly on electricity, unless and until electric power plants are themselves first "rehabilitated". Such power stations, whether hydro or steam-driven, have been damaged or completely wrecked on the scale above indicated. It is not possible, by any means or methods known to engineering science, to put these plants again into operation with "first aid repairs". The work must be embarked on to the extent of 90 or 100%. Otherwise one may as well leave it completely alone. Rehabilitation of power plants as a whole in South, Central and North Italy may take each from 2 to 3 years. Finally, the Sub-Commission was asked for guidance, the matter being of absolutely over-riding importance to the immediate future of Italy. If industries cannot be re-started, unemployment will increase; the country will become poorer and poorer; and Allied shipping will be needed to bring in imports, for which Italy will not be able to pay. Electricity, for power purposes, is the "key".

(e) Salvage of ships. (Refer to March report para 12(a), and later months).

This operation (raising sunken ships in harbors) was being organized by this Sub-Commission, corresponding to standard practice of the Italian Public Works Dept., when after a reference of the whole matter to the Commander-in-Chief, Mediterranean Station through the Naval Sub-Comm., we were instructed to take no further action.

On 10 July the C. in C. notified that all Royal Naval Salvage personnel and resources are being withdrawn from Sicily and from the "toe" of Italy, and asked A.C.C. (this S.C.) to resume activity. He is delegating authority for the commercial salvage of Italian vessels (not Allied) in E. Sicily and in Calabria. An Admiralty Memorandum M.S.N. 43 of 27 Feb.44 is to be strictly adhered to.

NOTE: We received no order. We were asked - since we had shown an interest - "Would we resume?". We answered "yes" - if they will issue to us instructions. (No such instructions received yet).

5. HIGHWAYS AND BRIDGES (MILITARY PRIORITY LIST) AND PUBLIC WORKS.

(a). The position at the end of June was noted in para.5 of the report for that month. Rebuilding Region VI, the re-building of 42 additional bridges was begun in July. Of these, 22 were in Regions III and IV. Some present difficult engineering problems, since they are modern long span structures, requiring special equipment and procedures for their restoration.

(b). Contracts in hand at the end of July numbered 236, an addition of 34 during the month. These represented a sum of 146.5 million lire, bringing the total value

Declassified E.O. 12356 Section 3.3/NND No. 785019

of contracts let (to 31 July) to nearly 300 million lire. This includes some miscellaneous work, as distinct from highways and bridges. (NOTE:- In this report M.L. = millions of Lire).

(c) Early in July special inspections were made by the Chief of this Division (Lt.Col.Thompson) of the following highways, including bridges, in the recently liberated areas:-

Route 1 - Rome to Grosseto
" 2 - " " S. Lorenzo Nuovo
" 3 - " " Narni
" 4 - " " Antrodoco
" 5 - " " Avezzano
" 6 - " " Carsoli
" 7 - " " "
" 17 - Rieti to Popoli
" 74 - Arbagna to S. Lorenzo Nuovo

Preliminary rehabilitation plans immediately followed.

(d) Transport for official inspection purposes was somewhat improved by the rehabilitation of civilian vehicles in Rome, and by allocation of 5 Utility cars from Members 2 and 3 Districts. The former received extensive repairs which were still in hand at the end of July, and the 8 military vehicles (Class 3 category) also requiring major repairs. It is hoped that at least four of them can be regularly available.

Lorries and trucks acquired from Nos.2 and 3 Districts (Army) for the transport of engineering material (in number 160) have been difficult to maintain in service owing to lack of spare parts, and wide-spread difficulties in supplies of petrol, oil, and lubricants. Probably not more than 50% of these vehicles can be kept in running condition at any one time.

There have also been most severe difficulties about supplies of P.O.L. to such private transport vehicles as have been brought into use by firms of contractors. To try and solve this, there were several meetings with officers of the Petroleum Section A.F.H.Q. in July. As a result, some special method of dealing with these supplies (involving military contracts) may be established.

(e) On the arrival of the Sub-Commission in Rome lists of experienced public works contractors were compiled, taking account not only of past experience, but also present available equipment and materials. In general, the equipment situation is better than it was south of Naples, but one is confronted with the inevitable and acute shortage of transport vehicles. Further, in recently liberated areas, many firms having adequate equipment and organization, were found to have been closely associated with the Germans and with Fascism. An effort has been made to "screen" these, but sheer necessity may compel some of these firms to be used on occasion. Even so, efforts are being made to ensure that their employment does not result in large profits to individuals with questionable records.

5. MEDICAL DIVISION.

(a) Staff.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

(c) = Brought up to date each week

Preliminary rehabilitation plans immediately followed.

(d) Transport for official inspection purposes has somewhat improved by the requisitioning of civilian vehicles in Rome, and by allocation of 8 Utility cars from Western 2 and 3 Districts. The former required extensive repairs which were still in hand at the end of July, and the 8 military vehicles (Class 3 category) also requiring major repairs. It is hoped that at least four of them can be speedily available.

Lorries and trucks acquired from Nos.2 and 3 Districts (Army) for the transport of engineering material (in number 160) have been difficult to maintain in service owing to lack of spare parts, and wide-spread difficulties in supplies of petrol, oil, and lubricants. Probably not more than 30% of these vehicles can be kept in running condition at any one time.

There have also been most severe difficulties about supplies of P.O.L. to such private transport vehicles as have been brought into use by firms of contractors. To try and solve this, there were several meetings with officers of the Petroleum Section A.F.H.Q. in July. As a result, some special method of dealing with these supplies (involving military contracts) may be established.

(e) On the arrival of the Sub-Commission in Rome lists of experienced public works contractors were compiled, taking account not only of past experience, but also present available equipment and materials. In general, the equipment situation is better than it was south of Naples, but one is confronted with the irremediable and acute shortage of transport vehicles. Further, in recently liberated areas, many firms having adequate equipment and organization, were found to have been closely associated with the Germans and with Fascism. An effort has been made to "screen" these, but sheer necessity may compel some of these firms to be used on occasion. Even so, efforts are being made to ensure that their employment does not result in large profits to individuals with questionable records.

6. ELECTRICAL DIVISION.

(a) Staff.

All the staff of this Division moved from Naples to Rome only in July. To offset the serious lack of officer personnel several first-class Italian electrical engineers were engaged, viz. with technical qualifications and experience, some of them having served with electrical companies operating in Northern Italy.

(b) War Damage.

Damage to electrical Power Stations and equipment throughout Central Italy is found to be most serious. Preliminary reconnaissance surveys have been made, on which some rehabilitation plans may be formulated. At some plants repairs have already started. At all important sites removal of debris and broken machinery is actively in hand. Some equipment can be repaired, but large quantities of the heavier and more complicated types of plant will have to be imported from the U.S. or from the U.K. It is just possible that some factories in

Northern Italy (when they are reached) may be able to replace their original manufactures, i.e. plant and machinery.

Arrangements made to requisition a number of small oil-operated portable plants, ranging in size from 25 KW to 2000 KW. Their installation is merely a temporary "stop-gap" until transmission line service can again be restored. They will then be transferred to other places for similar service.

The position in Rome was outlined in para.3 of the June report. To ensure the maximum output of electricity from the two thermal stations serving the City a steps would [illegible] inter-connection was made between plants used by the different Companies. The Sub-Commission gave technical advice, and also supervised the construction of a dam across the River Tiber raising the water level of the river, so as to improve the supply of cooling water to the two plants. (This matter is referred to in Rome Region report, para.13 (d) later.)

(c) Rates (to Consumers).

On page 15 of the June report a summary was given of the rate increases allowed to various electricity, water, and gas Companies. Arrangements have now been made with the Italian Ministry of Public Works to give preliminary consideration to all such requests in future, rather than have them wholly dealt with by this Sub-Commission. We consider it sound policy to get the Ministry interested in their own problems, particularly as such matters are of vital importance to all industries and to the general public.

The indications are that there will be many such applications imposing increased charges to consumers. (The June report shows that 20 were received whilst the Sub-Commission had its headquarters in Naples.) After consideration by the Italian Ministry their recommendations will be seen by this Sub-Commission and endorsed or otherwise, after consultation with other interested Sub-Commissions.

(d) Power Situation.

The reasons for this as applied to South Italy and to the Naples area were fully noted in previous monthly reports. The position in Rome City is such that a very strict economy scheme is necessary. Requests for supplies are screened by a Committee set up under the Rome Area Command and the Rome Region, in collaboration with this Sub-Commission. (Fuller details will be found in the Rome Region report para. 13 (d) later in this report.)

Electrical consumption in South Italy is now under complete control, and the geographical areas and Communities into which it is divided are keeping within the allocations made. Complete sets of graphs have been prepared and are being sent to all interested parties early in January. Similar graphs covering Central Italy are under preparation. Advice and assistance has been given to other Sub-Commissions A.C.C. re the possibility of electrical supplies to numerous industries, and establishments essential to the war effort.

(e) Actual Power.

The extreme seriousness of the position may be realised (following the preliminary surveys and studies made) when it is stated that only about 10% of the original power plants is in operating condition in Central Italy, out of a total of over 600,000 KW. Almost all this damage has resulted from deliberate demolition and mining by the retreating Germans.

Declassified E.O. 12356 Section 3.3/NND No. 785019

On page 15 of the June report a summary was given of the rate increases allowed to various electricity, water, and gas Companies. Arrangements have now been made with the Italian Ministry of Public Works to give preliminary consideration to all such requests in future, rather than have them wholly dealt with by this Sub-Commission. We consider it sound policy to get the Ministry interested in their own problems, particularly as such matters are of vital importance to all industries and to the general public.

The indications are that there will be many such applications imposing increased charges to consumers. (The June report shows that 20 were received whilst the Sub-Commission had its headquarters in Naples.) After consideration by the Italian Ministry their recommendations will be seen by this Sub-Commission and endorsed as otherwise, after consultation with other interested Sub-Commissions.

(d) Power Rationing.

The reasons for this as applied to South Italy and to the Naples area were fully noted in previous monthly reports. The position in Rome City is such that a very strict rationing scheme is necessary. Requests for supplies are screened by a Committee set up under the Rome Area Command and the Rome Region, in collaboration with this Sub-Commission. (Fuller details will be found in the Rome Region report para. 13 (d) later in this report.)

Electrical consumption in South Italy is now under complete control, and the geographical areas and Companies into which it is divided are keeping within the allocations made. Complete sets of graphs have been prepared and are being sent to all interested parties early in August. Similar graphs covering Central Italy are under preparation. Advice and assistance has been given to other Sub-Commissions A.C.C. on the possibility of electrical supplies to numerous industries, and establishments essential to the war effort.

(e) Coastal Ports.

The extreme seriousness of the position may be realised (following the preliminary surveys and studies made) when it is stated that only about 10% of the original power plant is in operating condition in Central Italy, out of a total of over 600,000 KW. Almost all this damage has resulted from deliberate demolition and mining by the retreating Germans.

(f) Finances.

A fund is being arranged so that the Electricity Companies may carry out urgent reconstruction and repair works, in conjunction with the Finance Sub-Commission A.C.C. and the appropriate Ministries of the Italian Government.

(g) Inter-Resources Board (Italian).

The Electrical Sub-Committee of this Board allocated power to the various areas

Declassified E.O. 12356 Section 3.3/NND No. 785019

of Central and Southern Italy for the month of August. Its meetings are attended by Lt. Col. L.C.P.E., Chief of the Electrical and Utilities Division of this Sub-Commission.

(b) Central Electricity Board.

Information was received in July that the Board is to be dissolved and its functions transferred to this Sub-Commission. To coordinate the work of the Sub-Commission with military requirements an advisory committee known as the "Electrical Reconstruction Committee, Italy" has been formed under A.M.G.I. and presided over by the Chief Engineer of A.M.G.I. and the Chief of our Elect. Div. is Vice Chairman. Dissolution of the C.E.B. results in an additional burden of responsibility on this sub-commission. Its Electrical Division is being, in consequence, largely reorganized and strengthened.

(c) [illegible]

The Sub-Commission was represented at meetings of the Mediterranean Control Commission, where matters affecting the allocation of such supplies (held at A.F.H.Q., N. A.), at the latter the procedure for coal supply and its transportation were clarified.

The Psychological Warfare Board asked for assistance in providing material for use in a magazine published by them. Part of a future issue will be devoted to damage done to electric power systems in Italy by the enemy. Its purpose is to inform the Italian people, and to portray to them, in picture form, some of the reasons why there is so acute a shortage of electricity.

7. REGIONAL REPORTS.

Region I - Sicily. (Regional Engineer Lt. Col. Belich).

(a) A part of the Regional Engineer's time, in July, was devoted to efforts to repair many of the large number of Public Works projects that had been carried out under A.M.G. auspices, i.e. from September 1943 onwards. Some of the works were completed quite well, but when contractors submitted their bills it was found that the estimates had not passed through the usual channels of the Genio Civile (Provveditorato alle O.O.P.P.). Under the Italian system not only have proper plans and estimates to be produced, but a multitude of decrees for each individual scheme are necessary. The Genio should, therefore, in Sicily, but where the schemes were so exact in extent, why they were necessary, and the authority that did, in fact, authorize their execution. The Regional Engineer considers that in such cases much work will be necessary, in order that the records of the Genio Civile may be rectified. (The latter is, in a way, the record of "skeletons in the cupboard"). In Catania the very extensive work of repairing bomb damage in the streets and sub-surface system of Palermo City, carried out under the orders of the Municipality of Palermo, whereas it should have been done with the knowledge and approval of the Genio Civile. Finally, the latter refused to pay. Accordingly, out of this confusion no bills were paid to either. Matters became so bad in recent months, contractors being owed so much money by the Comune of Palermo, that there was grave danger of a certain body "downing tools". Had that happened, all debris clearance and urgent war damage repair work would have stopped. Over the Island, [illegible] attention has turned back to urgent peace-

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

[illegible].

(c) [illegible].

A [illegible] was represented at meetings of the Malaria Control Committee, which met[illegible] for the allocation of such supplies (held at [illegible]). At this latter the procedure for such supplies, its transportation were clarified.

The Psychological Warfare Board asked for assistance in providing material for use in a campaign mobilized by them. Part of a future issue will be devoted to bombing on the electric power systems in Italy by the enemy. Its purpose is to [illegible] the people, and to portray to them, in picture form, some of the reasons why there is so acute a shortage of electricity.

7. REGIONAL REPORTS.

Region I - Sicily. (Regional Engineer Lt. Col. Bolick).

(a) A part of the Regional Engineer's time, in July, was devoted to efforts to repair some of the large number of Public Works projects that had been carried out under A.M.G. auspices, i.e. from September 1943 onwards. Some of the works were completed months ago, but when contractors submitted their bills it was found that the schemes had not passed through the usual channels of the Genio Civile (Provveditorato alle O.O.P.P.). Under the Italian system not only have proper plans and estimates to be prepared, but a motivating Decree for each individual scheme are necessary. Time was spent, therefore, in finding out where the schemes were to start location, why they were necessary, and the authority there did, in fact, authorize their execution. The Regional Engineer considers that much more such work will be necessary, in order that the records of the Genio Civile may be maintained. (The latter is, in a way, the removal of "skeletons in the cupboard"). An example was the very extensive work of repairing bomb damage in the streets and railway tunnels of Palermo City, carried out under the orders of the Municipal Authority; whereas it should have been done with the knowledge and approval of the Genio Civile. Finally, the latter refused to pay. Something out of this confusion occurred then and at the end. Matters became so bad in recent months, contractors being owed so much money by the Comune of Palermo, that there was grave danger of a certain bank "foreclosing". And that happened, all debris clearance and urgent war damage repair work would have stopped. Over the Island, generally, this particular situation has improved much in recent weeks.

(b) Agrigento Province.

A good investigation was made in connection with the Genio Civile of an aqueduct supplying a number of towns on the south coast of Sicily, including Licata. At the Platani River there is a crossing by means of a bridge, and in the operations of July 1943 this was destroyed. There was also other damage caused by a landslide. To rebuild the bridge carrying the aqueduct, and to construct a tunnel at the landslide site, will cost about 14 million lire. The water position is serious in all the Communes supplied by the aqueduct. To the [illegible] of simple water is having to be carted. Apart from the high cost of the scheme, its execution will involve considerable expenditure of [illegible], which is in very short supply. It is being carefully considered by the Regional Engineer, and in due course will come to the Sub-Commission for approval.

6 163

Declassified E.O. 12356 Section 3.3/NND No. 785019

(c) [illegible]

[illegible] but the middle of July showed that [illegible] of the work of clearing Messina, [illegible] a sum of about 100 M.L. had been spent. There was a considerable division [illegible] in the Messina Service of the Genio Civile, but most of this was discharged by July, leaving remaining clearance work in the hands of the local Genio Civile organisation (in whom the Regional Engineer has full confidence).

The Prefect of Messina is in the habit of putting forward large schemes for approval, but the Regional Engineer has laid it down as a general policy that previously approved projects must in general be well in hand, and indeed [illegible] completed, before other schemes are considered.

Catania:

As to this, on 4 August 1944, the new High Commissioner for Sicily called at the H.Q. of the Sub-Commission here in Rome, to put forward a special plea that he should be given powers to sanction schemes in the Island, in amounts up to say 10 M.L. He was on the point of leaving Rome to take up his new appointment at Palermo, relieving Sig. Musotto who was appointed to the High Commissionership only a few months ago. The new Commissioner was told that there is, under present circumstances and having regard to the acute shortage of critical structural materials (steel, iron, timber, cement, etc.) little likelihood of his request being granted.

Demolition and debris clearance are also going on in eight of the communes in the vicinity of Messina where severe war damage occurred. The same applies to the City of Catania, and in three communes adjacent.

(d) Palermo Province.

Work on all interruptions on provincial roads is nearing completion, i.e. restoration to normal. It is reported that the Genio Civile have carried out a good piece of satisfactorily".

(e) Military Matters.

Three special road repair detachments were submitted to H.Q. during the month and designs and estimates for three bridges of major importance, with all the usual technical details.

(f) Palermo - Messina Road.

Progress on this is far from satisfactory. The amount of work carried out under the heading of bridges is very considerable. At the Imera crossing, the bridging of the Bailey bridge was begun on 24 July. Road traffic is diverted to the new permanent bridge. At the Milazzo crossing, the C.R.E. (Army) recently erected the Bailey bridge but it had been there for a long time, to avoid it be turned around to avoid traffic. The Bailey was re-launched on 12 July by which time a temporary footbridge had been constructed for the use of foot-passengers.

(g) Materials.

The output of the asphalt works at Ragusa is limited by shortage of machinery to pulverise the rock and explosives to quarry it. Shortage of explosives, generally, militates against the proper working of many stone quarries. There are two large cement works on the Island, [illegible]

Declassified E.O. 12356 Section 3.3/NND No. 785019

[illegible] maximum up to only 10 M.P. He was on the point of leaving Rome to take up his new appointment at Palermo, relieving Brig. Muscatto who was appointed to the High Commissioner[illegible] only a few months ago. The new Commissioner was told that there is, under present circumstances and having regard to the acute shortage of critical structural materials (steel, iron, timber, cement, etc.) little likelihood of his request being granted.

Demolition and debris clearance are also going on in eight of the communes in the vicinity of Messina where severe war damage occurred. The same applies to the City of Catania, and in three communes adjacent.

(a) Palermo Province.

Work on all interruptions on provincial roads is nearing completion, i.e. restoration of transit. It is reported that the Genio Civile have carried out these [illegible] satisfactorily.

(b) [illegible] Province.

Three special road repair estimates were submitted to H.Q. during the month and designs and estimates for three bridges of major importance, with all the full technical details.

(c) Palermo - Messina Road.

Progress on this is far from satisfactory. The amount of work carried under the heading of bridges is very considerable. At the Dumi crossing, the [illegible] of the Bailey bridge was begun on 24 July. Road traffic is diverted to the new permanent bridge. At the Morta crossing, the C.R.E. (Armies) urgently wanted the Bailey bridge that had been there for a long time, to send it to forward areas in north Italy. The Bailey was [illegible]-launched on 12 July by which time a temporary foot-bridge had been constructed for the use of foot-passengers.

(d) Materials.

The output of the asphalt works at Ragusa is limited by shortage of machinery to pulverise the rock and explosives to quarry it. Shortage of explosives, generally, militates against the proper working of many stone quarries. There are two large cement works on the Island, but coal and transport shortage limits the output. There are pine forests on the slopes of Mt. Etna, but it is almost impossible to get transport for the delivery of trees to the mills. Numerous foundries in Sicily can produce castings and some steel; scrap iron and steel are available, but there is a most severe shortage of coal and coke for smelting purposes.

(h) Transport.

The situation shows no change as compared with previous months. It is extremely serious. The Regional Engineer is keeping up a "continual pressure". This is particularly essential where work on bridges is concerned, because in less than 3 months the rainy season will start again, torrents and rivers will come down in heavy floods, and partially completed works are particularly susceptible to flood damages.

(i) Further accommodation in Prisons.

This was referred to in Para.6 (vi) of the June Report. Additional accommodation was provided for about 3000 prisoners, a proportion of these to be reconstituted at Caltanissetta, Favignana and Augusta in Sicily. Work has already started on the first of these, and the Genio Civile are preparing plans and estimates for the two latter under general guidance of the Regional Engineer. Towards the end of the month a proposal was received to use the Island of Ustica for prison purposes and this Sub-Commission sent an officer there to make an investigation.

(j) Emergency Repairs.

Emergency repairs to public works in Sicily, chiefly restoration and re-wire connections damaged by fire, so far as is possible to ascertain, amounted to just over 733 M.L. This was from the date of occupation in 1943 to 30 April 1944. (Figures for May, June and July are under preparation and will be submitted later). It is interesting to note that, of the figure mentioned, about 344 M.L. were spent on bridges and waste restoration, 84 M.L. on removal of debris and demolitions, and 97 M.L. on restoration of public buildings. Aqueducts and water supply involved 26 M.L., and main-line track repairs 42 M.L.

(k) Electricity.

Referring to para.9 (vi) of the June report, which gave data concerning power stations both hydraulic and steam-driven, the Regional Engineer furnishes similar data in considerable detail for the month of July. Also as to volumes of water held in reserve at the principal high level reservoirs.

It also shows the undermined repair works (mentioned in the above report) in hand at the Fiumara, Porto Empedocle and C and D steam-driven electric power stations. The Porto Empedocle plant was expected to be restored to full service by the end of July. Repairs to the tunnel at the San Carlo Hydro-Electric station made good progress, 58 meters of various classes of work having been completed, with 31 meters still remaining.

(l) Projects in hand.

Referring to the information given in the June report, para.9 (ii), the 152 projects there mentioned have now been increased to 172. Of these, there are only 5 exceeding in value 5 M.L. each, and there are six schemes of between 1 M.L. and 5 M.L. each. Of the remainder, a very large proportion are below 0.1 M.L. each. The gross total amounts to 60 M.L. The figure includes 19 schemes of repairs to churches, all in Palermo with the exception of three which are at Messina. These church repairs have only been undertaken under the general control of the Regional Engineer, at the express request of the Monuments & Fine Arts Sub-Commission. For the most, the list of 172 projects comprises almost every class of work, e.g. waterworks, bridges, public buildings, demolition of dangerous buil-

Declassified E.O. 12356 Section 3.3/NND No. 778509

as the first of June, and the Santa Cecilia are preparing bids and estimates for the two latter under general guidance of the Regional Engineer. Towards the end of the month a proposal was received to use the Island of Ustica for summer purposes and the Sub-Commissioner sent an officer there to make an investigation.

(b) Communications & Transport.

Expenditure on public works in Sicily, mainly restoration and repairs communications, so far as is available to record it, amounted to just over 733 M.L. [illegible] the date of occupation to 1945 & 30 April 1946. (Figures for May, June and July are under preparation and will be submitted later). It is interesting to note that, of the figure mentioned, about 344 M.L. were spent on bridges and roads restoration, 84 M.L. on removal of debris and demolition, and 97 M.L. on restoration of public buildings. Aqueducts and water supply involved 26 M.L., and main-drainage repairs 41 M.L.

(c) Electricity.

Referring to para.9 (vi) of the June report, which gave data concerning power stations both hydro-electric and steam-driven, the Regional Engineer furnishes similar data in considerable detail for the month of July. Also as to volumes of water held in reserve at the principal high level reservoirs.

A close check was maintained on repair works (mentioned in the June report) in hand at the Palermo, Porto Empedocle and Catania steam-driven electric power stations. The Porto Empedocle plant was expected to be restored to full service by the end of July. Reports to the Naval at the San Carlo Hydro-Electric Station made good progress, 28 motors of various classes of work having been completed, with 31 motors still remaining.

(d) Railways & Ports.

Referring to the information given in the June report, para.9 (iii), the 132 projects there mentioned have now been increased to 172. Of these, there are only two exceeding in value 5 M.L. each, and there are six between 1 M.L. and 5 M.L. each. Of the remainder, a very large proportion are below 0.1 M.L. each. The gross total amounts to 60 M.L. The figure includes 19 schemes of repairs to churches, all in Palermo with the exception of three which are at Messina. These church repairs have only been undertaken under the general control of the Regional Engineer, at the express request of the Monuments & Fine Arts Sub-Commission. For the rest, the list of 172 projects comprises almost every class of work, e.g. water-works, bridges, public buildings, demolition of dangerous buildings, lighthouses, hospitals, ports and harbors, etc.

B. Region II (Regional Engineer Major Knight).

(a) The Regional Engineer has taken over responsibility for Foggia Province which up to recently was in A.M.G. territory.

(b) On 23 July Lt. Stephens (R) reported to the Regional Engineer for duty. The

6466

Declassified E.O. 12356 Section 3.3/NND No. 785019

services of 2 Italian engineers have also been obtained to assist, in view of the volume of work in hand.

(c) Materials (quarries).

Quarries operated by a large firm of contractors SALCOI under the Regional Engineer are now producing the quantity of stone chippings contracted for. Another quarry on the Barletta - Canosa Road that was intended to open has now been abandoned because the Army would not permit the use of 1 km. of a closed section of the approach road to be used by the lorries. The Army has requisitioned another quarry at Altamura, for use of the Regional Engineers contractors. Two additional stone-crushers were obtained in July with a combined output of 80 tons in a 10-hour day.

(d) Potenza Province.

A new surfacing of Route 96 from Potenza to Solvi was started, several kms. being completed and two crushers for the production of chippings were also found.

Throughout July, extensive patching and repairing went on along the whole length of Route 96 from Gravina boundary through Solvo, Potenza Ito. A Rome firm of contractors has a local office in Taranto (Messrs. Rotundi) and the Rome office placed a credit of L.25 M.L. in the bank at Taranto to enable their manager there to operate.

(e) Military Highways.

On all these, maintenance work progressed "very satisfactorily" in July. Shortage of bitumen for the re-surfacing of Route 16, Bari to River Ofanto has compelled cessation of further work, but the worst portions of the road have now been completed. Similarly, the same type of work on Route 96 from Canosa to Bari can only proceed as far as Bovo. Two other stretches of highways (military priority) were contracted for, viz. between Bitetto and Adolfia. Experimental work was done on the road between Bitonto and Bitetto with emulsion produced at a factory in Bari using olive oil to break down the bitumen. (This experiment is being carried out at the special request of the Chief Engineer, No.2 District (Armies)).

(f) Bridges.

At the River Ofanto on Route 16 the new bridge made good progress (built up to 6 feet). Demolition of the old bridge over the same river Route 96 was completed. Certain other bridge works were seriously delayed in July owing to cement shortages.

(g) Provincial and Communal Highways.

The Genio Civile have a program for Bari Province and the C.M.E. (Army) is providing certain materials and equipment. The same applies to Communal Highways in Brindisi Province. At Taranto, the C.M.E. has two road construction companies which he wished to keep fully employed. The Regional Engineer agreed to these companies doing certain work previously as the responsibility of the Genio Civile (presumably the C.M.E. is keeping an account of this expenditure with a view to eventual recovery of the cost from the Italian Government).

(h) Other Works.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(d) Potenza Province.

A new surfacing of Route 93 from Potenza to Tolvi was started, several kms. being completed and two crushers for the production of chippings were also towed.

Throughout July, extensive patching and repairing went on along the whole length of Route 96 from Cravina boundary through Tolve, Potenza Tito. A Rome firm of contractors has a local office in Grumito (Messrs. Rotundi) and the Rome office placed a credit of 1.25 M.L. in the bank at Grumito to enable their manager there to operate.

(e) Military Highways.

On all these, maintenance work progressed "very satisfactorily" in July. Shortage of bitumen for the re-surfacing of Route 16, Bari to River Ofanto has compelled cessation of further work, but the worst portions of the road have now been completed. Similarly, the same type of work on Route 98 from Canosa to Bari can only proceed as far as Ruvo. Two other stretches of highways (military priority) were contracted for, viz. between Bitetto and Adelfia. Experimental work was done on the road between Bitetto and Bitonto with emulsion produced at a factory in Bari using olive oil to break down the bitumen. (This experiment is being carried out at the special request of the Chief Engineer, No.2 District (Amalfi)).

(f) Bridges.

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(h) Other Works.

At Taranto, at hospitals in Bari, Taranto and Lecce, special works are required and estimates and schemes were examined. Alterations to the specifications were made in Court in order to avoid the use of critical materials. Similarly, schemes for repairs to post office buildings and barracks for firemen at Brindisi were approved, and minor buildings, water works and rain-drainage and sewerage [illegible] several other places.

(i) Electricity.

An increased allotment of electric energy was made to the Apuglia area and the Foggia Paper Mill can now be operated. There was trouble with the employees of the Pugliese Electricity Co. over wages, which was settled by the Regional Labour Officer (at any rate temporarily).

The Regional Engineer reports that the [illegible] generally had paid little attention to the figures published by the Italian [illegible] requiring persons who wanted continuation of supply to make a special application. The position will have to be brought to [illegible] by cutting off supplies, since

Declassified E.O. 12356 Section 3.3/NND No. 785019

9. REGION III. (Regional Eng. Lt.Col. HENSLEY)

(a) Territorial Changes.

On the 20th July the Provinces of Benevento and Avellino were handed over to the control of the Italian Government, together with Naples Province, excluding the Fort and City.

(b) Labour, contractors etc.

No. III District (Armies) had difficulties concerning labour, and the Cantonieri. There were two specific complaints concerning the Venafro and Frosinone areas, but in point of fact these concern Region IV and not Region III. (No. 3 District was advised accordingly.)

All contractors working, principally on roads and bridges in Region III, were called to a conference at Caserta during the month. This proved useful, and similar meetings will be held monthly in future. Personal contact was established, and the Regional Engineer was able to answer questions on policy, supplies of materials, and systems of execution and control.

A second conference was held at Caserta, attended by provincial representatives of the Genio Civile throughout the Region; plans were made for the following month (August), and a program defined.

(c) Personal.

Capt. Feldman, an officer with considerable experience of highways and bridges problems, was transferred to one of the new Northern regions, and also an enlisted man. Two Italian civilians were taken on in their place. More will have to be engaged in the near future.

(d) Inspection tours.

Detailed inspections are made (personally by the Regional Engineer) in Benevento Province and in Salerno Province. In the former a certain reservoir, supposed to have been subjected to war damage, was found to have no connection with that at all, the damage having occurred four years ago through a landslide. Road conditions and all bridges as far as Campobasso were examined, and discussions followed with the Provincial Commissioner. Route 7 (Bis) was also gone over on the following day. Apart from severe lack of cement for the making of concrete the progress position was found to be "excellent".

Salerno Province was noted as almost equally satisfactory, save that a bridge project, the principal one in Agropoli, had not been started. Necessary arrangements were made.

At Aversa the Military Railways Service was assisted to overcome severe water shortage difficulties, which were hampering supplies of water to the locomotive depot there. A pump was quickly installed and a contractor put to work (a deputation from the Military Railways Service had attended at the HQ. of the Sub-Commission a day or two previously, in order to explain the seriousness of the situation at Aversa).

(e) Works in hand.

Declassified E.O. 12356 Section 3.3/NND No. 745019

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(c) Personnel.

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(e) Works in hand.

An extremely heavy amount of work is in hand in this region. The volume and complexity of it can only be appreciated by examination of various series of tabulated statements. Several thousand workmen are engaged, dozens of contractors, and the aggregate cost runs to many scores of million of lire. At the end of July, for example, there were 48 special road construction contracts, the majority of them ranging from 1 to 5 million lire each, and with one contract of 12.5 million lire. (Included in the 48 are 13 contracts in preparation, but not yet finally let.)

Similarly, there were 25 bridges actually in hand, 6/65 for which tenders were being invited, and one scheme in preparation (plans and calculations).

On highways carrying military priorities there were (by the middle of July)

Declassified E.O. 12356 Section 3.3/NND No. 785019

18 bridge projects in hand, of which five were over half completed. Two Bailey bridges (portable) were moved by the Army to forward areas during the month, and at three other sites the present Bailey bridges can be removed in due course.

(f) Naples City.

This was referred to in para. 11 of the June report in detail. The Regional Engineer generally superintended about 20 repairs and building works in the City of Naples, of an urgent nature carried out by the Municipality; also street repairs to the number of 22. A work mentioned in the June report in para. 11 (iii), Stella Polare, was completed after considerable difficulties in getting the balance of 50 tons of cement required, and co-ordination of the street works with underground works in hand by gas, railway, and water companies. The new water main was practically completed.

Naples was largely without water for about 36 hours during the month, due to a breakdown of the aqueduct many miles away from the City. Very special efforts were made by the Regional Engineer to get the Water Company to complete the emergency repairs. These were successful, and the City was relieved from a situation that was rapidly becoming serious in the very hot weather.

Further, a tunnel was lined with cement at Capodimonte which will in itself constitute a water storage, and ensure a supply to consumers on higher levels surrounding the City. This tunnel will also enable the Commune of Chiaiano to have a supply of water, which it has never had before.

(g) Gas Supplies.

Referring again to para. 11 (vii) of the June report (concerning gas) supplies were given to 12 additional streets in Naples. Coal for the works came in regularly in July, and at the end of the month there was a stock sufficient for the next two months.

(h) Electricity.

Para. 11 of the June report noted that 650 applications for continued supplies had been received. In July there were 247, of which 79 were rejected and four were deferred. Acceptance or refusal of such applications, as has been noted in previous monthly reports, has a direct bearing on the amount of energy available for essential war industries and the due functioning of public utilities. The power allocation for July (Region III) was 14 million units, which was nearly 2½ million less than that for June. The Regional Engineer protests against this reduction, since essential industries will be started in the autumn. He considers that consumption of electricity by the Armed Forces ought to be [illegible] carefully rationed as civilian consumption". The new 5,000 K.V.A. transformer installed at Torre Annunziata (see last month's report) unfortunately failed, and the electrical load in the area will therefore not get the relief that was anticipated. The breakdown is being investigated.

(i) Communications.

The report contains information about telephone and telegraph services in some detail (presumably to be dealt with by the Sub-Commission primarily con-

Declassified E.O. 12356 Section 3.3/NND No. 785019

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10. REGION IV. (Regional Engineer, Col. Edwards.)

(a) The report gives some details about transportation and communications, which will be taken note of by the Sub-Commissions concerned. (As indicating road traffic, under the former, it is reported that over 3,400 tons of goods were hauled in July, this includes 2,486 tons of food-stuffs. In addition 361 persons and their baggage were transported.)

Declassified E.O. 12356 Section 3.3/NND No. 785019

(b) Projects (Valle).

During July about 20 schemes in the three Provinces of Frosinone, Littoria and Rome were approved for urgent execution.

At the end of the month further schemes amounting to 41 million lire were under preparation; of these, 38 million represented rehabilitation of water-works, mostly in the heavily damaged Province of Littoria. The total of 82.5 million lire covers buildings, water, main drainage, damages and debris clearance, together with a small amount for electricity and Bonifica (anti-malarial) measures.

The figure does not include any expenditure on roads and bridges.

(c) Personnel.

The Genio Civile by the end of July had a fairly complete staff in the three Provinces mentioned, and also in Viterbo, Rieti and Terni. The Regional Engineer has largely staffed his own office with Italian personnel. (Weekly progress reports now arranged for from the Genio Civile of the six Provinces.)

(d) Water Supplies etc.

Water supply difficulties reported in Perugia, and three pumps were installed. Maps prepared showing all demolished and damaged bridges in the two Provinces of Rieti and Viterbo. Some repair works were started under A.M.G. (Army) auspices, which will be continued. A scheme to cost four million lire for urgently needed water supplies in Rome Province, (outside the city) was under preparation. For Anzio and Nettuno a one million lire scheme is well advanced (water supply) and one of the three new pumps started work. Distribution systems require considerable overhaul.

Reconnaissances made and agreement reached in principle for a three million lire scheme to rehabilitate water supplies to 11 separate communes round Colli Laziale; water from the large Simbrivio Aqueduct will shortly be available for the towns of Velletri, Palestrina, Cave and Leriano (which in the meantime are in serious difficulties).

The Genio Civile instructed to give first priority to water supplies, and secondly main drainage. In four towns they have been allowed to begin salvage and debris removal schemes.

Small aqueduct at Piuggi repaired (on a bridge) and supply now normal. The Simbrivio Aqueduct, which serves 24 communes and 300,000 people temporarily repaired where it crosses the Aniene River, and now delivering water to 14 out of 24 Communes. Further repair works still in hand, also at the Cepreno and Sora Aqueducts, both in Frosinone Province. At Frosinone town pumps and motors were repaired, temporary tanks provided, repairs done to rising mains, and a further scheme will enable water to be delivered to higher parts of the town. Numerous other water rehabilitation schemes in hand viz. - at S. Giorgio, S. Appolinario Frosinone Province, and for Terracina, Fondi, Itri, Gaeta, Formia, Minturno, and other places in Littoria Province. The Genio Civile made little progress up to the 15th July, and the Regional Engineer, therefore, arranged for the Professor of Hydraulics at Rome University (Prof. Colosimo) to make special inspections. Within a week he submitted preliminary proposals for all the towns mentioned,

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Generally, it is expected that restoration of water supplies to towns will not cost anything up to 13 million lire.

6164

(e) Other works.

In Frosinone town a 20 million lire scheme was submitted for buildings (re-construction) in order to enable the Provincial Administration to re-start.

Declassified E.O. 12356 Section 3.3/NND No. 778019

There is a 14 million lire scheme also for other building repairs, together with a scheme for repair of 4 urgently needed public buildings in the town of Littoria.

A project was received from Terni just before it was due to revert to Region IV. This is taken as a good augury of coming Genio Civile activity there.

(f) Electricity.

Out of a total of over 660,000 K.V.A. installed, the effective output at the end of July was only 33,000 K.V.A. A measure of the destruction carried out by the enemy in this part of Italy. Figures include the large hydro-electric plant at Terni of 385,000 K.V.A., practically completely destroyed. One station at Scalelle of 8,000 K.V.A. resumed operation on 27th July, but the advantage has scarcely been felt because of the enormous demand for electricity in Rome City and its surroundings, and the drop in water-levels at the hydro-electric storage reservoirs. Small steam-plants generating electricity near Civitavecchia and Rieti are being repaired, but these will only give 2,500 K.V.A. Data and information on other small generating stations in outlying districts being collected. In the south of the Province distribution lines have been extended to Frosinone and power may have to be passed to these from stations north of Rome; this will tend to reduce the quantity available for Rome itself, and north thereof.

(g) Highways and bridges.

For Route 1 a maintenance contract was arranged, after some difficulties owing to exceptionally high wages being paid in Civitavecchia.

On Route 2 250 men were at work at the end of July with tunnel entrances being reconstructed at Viterbo and Bolsena.

On Route 3 a maintenance contract has been taken over from the Eighth Army A.A.&.Q.

On Route 4 contracts have been let for 3 bridges and the filling of craters; 3 more bridges to begin by the first week in August.

On Route 5 Cantonieri personnel have been increased and special repairs will be finished by the end of August. Contracts let for complete re-building at three demolitions, these involving over 20,000 cu/yds of rock excavation. There are also retaining walls and tunnel entrances.

On Route 6 contracts prepared for the bridge at Melfa River. Work at Ceprano bridge delayed owing to shortage of cement.

On Route 7 maintenance is by 2 contractors, one of these employing over 300 men.

On Route 82 (Arce/Avezzano), there are 47 demolitions in a length of 70 km. Tenders received for repairing half of these (also 11 bridges on this road being built by the Provinces, under local arrangements).

Generally, in the Region, 59 bridges are under construction, with a completion date for the larger ones of 1st November next.

(h) Remarks.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Generally, in the Region, 59 bridges are under construction, with a completion date for the larger ones of 1st November next.

(h) Remarks.

The Regional Engineer reports, apart from general transport difficulties, as follows:-

"Enormous difficulties due to breakdown of organisations were successfully overcome in the matter of passes, permits and control. All this latter was work which should not fall on this Division (Public Works)."

Declassified E.O. 12356 Section 3.3/NND No. 785019

11. ROME REGION. (Regional Engineer Lt-Col. BIRCHETT).

(a) Whilst Rome remains a "whole" city, one of the few Capitols in Europe which the tide of war was swept round, or gone over, it is not a normal city so far as many things are concerned. Electric power is notably lacking, and there is little or no fuel. A population much greater than normal coupled with a considerable influx of troops, heavy military traffic on roads and streets not constructed for it, together with considerable damage to the water supply system, have presented the Regional Engineer with innumerable problems. Again, because many high-ranking officers have decided to make their headquarters in Rome, time has had to be spent on minor works, under orders, that were perhaps not in keeping with their relative importance. There has been joint and very profitable use of engineering personnel as between the C.M.F. (British) and the N.A.A.C. (American), in conjunction with Col. Birchett's staff. (The latter consists of only seven officers, British and American, in addition to Lt-Col. Birchett.)

Because of the comparatively limited area inspection tours are usually carried out in a few hours, including those as far away as the coast on the west.

(b) Highways.

Routes 1 - 8 are in the Rome Region, all of military importance except No. 5. Heavy traffic of the Fifth and Eighth Armies has involved equally heavy repairs, mostly on contract. The by-pass road round Rome is of considerable importance, and the Genio Civile have been specially instructed as to its maintenance.

Numerous secondary highways have been neglected, since practically all transport, petrol supplies and asphalt were needed (June and July) for the other highways mentioned.

(c) Buildings etc.

A moderate building program was begun, concerning hospitals, the University and certain State monuments. Only essential work has been approved. There are several "Bonifica" (anti-malarial) works in the Rome Region which remain flooded, owing to destruction of pumping plants by the enemy. Some have been repaired and are now operating, under liaison with the Medical Authorities. Certain irrigation works in the Agro Romano are obtaining water by allowing only night pumping, when some electricity can be spared.

(Note:-

(i) As to the "Bonifica" works, PMB/Rio of 7 Aug 44 stated that:

Rome: "Pernicious malaria has re-n greeted for the first time in many years, but there is no quinine."

(ii) Refer also to para. 3 (b) this report.)

(d) Electrical.

Rome is now receiving power from two steam plants and a certain amount from

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Rome: "Pernicious malaria has re-appeared for the first time in many years, but there is no quinine."

(ii) Refer also to para. 3 (b) this report.)

(d) Electrical.

Rome is now receiving power from two steam plants and a certain amount from seven hydro-electric plants. Damaged transmission lines between the plants and Tivoli have been repaired.

For the steam plants delivery of fuel continues to be a major difficulty. Diesel oil was shipped in July from Naples to Anzio by A.C.C. schooners, and from Anzio to Rome by civilian trucks. Coal is required at the rate of 100 tons a day, and this has been approved by the Coal Allocation Section. The greatest average delivery in July, however (over seven days) was at the rate of only 185 tons.

In the Tiber River there is a seasonal drop in the water-level. A temporary dam had to be constructed to raise the level, in order to ensure a supply of

6463

Declassified E.O. 12356 Section 3.3/NND No. 785019

cooling water to the condensers; it is hoped that this will enable the steam plant to operate until the autumn rains.

Under electricity rationing City users have been classified into three categories, i.e.

1. Preferential (military and civilian) 24 hours per day;
2. Semi-preferential, 8 hours per day;
3. Others 16 hours every fourth day.

The number of preferential consumers was increased by 44 in July, making a total of 155.

(e) Gas service.

The "Societa Romana del Gas" has repeatedly asked permission to resume service. Their latest proposal is for the whole City, for only 1½ hours out of the 24. This would require 240 tons per day of coal, which is not available at present.

(f) Tramways.

Trams and trolleybus services have continued on a limited scale, but a new operational plan provides longer hours as from 1st. August, without increasing the consumption of electricity. (Of the total electrical energy now available for Rome, about 12% is required for the running of street-cars.)

(g) Water-supply.

This is still a most serious problem. Mains between the springs of Tre-Fi are now in wooden troughs, which will have to be replaced before the autumn. Springs at the source are still a mass of ruins. Valve stations have to be re-built. One principal source, a spring requiring pumping, is out of action. Nevertheless, the Marcia Aqueduct is now furnishing 87% of its normal quantity, and the other systems almost their normal. High level areas of the city are frequently without water because of local breaks in distribution mains, or more frequently because army units with pumps have almost emptied the mains, depriving higher levels of any pressure. There can be no improvement until this practice ceases, and until the springs and the main aqueduct are again operating at 100% efficiency. Units containing large numbers of men frequently move into buildings or establish residential camps, in places where the existing mains are too small to afford proper supplies. There are serious difficulties and complaints. (The Regional Engineer suggests that if Units would be more careful to consult his Department before taking over buildings, on this question, there would be less trouble.)

(h) Other works.

There was some damage to the main drainage system, which is still under repair. Banks defining the River Tiber were broken and damaged in several places; reconstruction is in hand.

(i) Materials.

All repair work have been hampered by shortage of cement, asphalt, tarpaulins and other things.

Declassified E.O. 12356 Section 3.3/NND No. 785019

The "Societa Romana dei Gas" has repeatedly asked permission to resume service; their latest proposal is for the whole City, for only 12 hours out of the 24. This would require 210 tons per day of coal, which is not available at present.

(f) Tramways.

Trams and trolleybus services have continued on a limited basis, but a new operational plan provides longer hours as from 1st. August, without increasing the consumption of electricity. (Of the total electrical energy now available for Rome, about 10% is required for the running of street-cars.)

(g) Water-supply.

This is still a most serious problem. Mains between the springs at Tivoli are now in wooden troughs, which will have to be replaced before the autumn. Springs at the source are still a mass of ruins. Valve stations have to be re-built. One principal source, a spring requiring pumping, is out of action. Nevertheless, the Marcian Aqueduct is now furnishing 87% of its normal quantity, and the other systems almost their normal. High level areas of the city are frequently without water because of local breaks in distribution mains, or more frequently because Army units with pumps have almost emptied the mains, depriving higher levels of any pressure. There can be no improvement until this practice ceases, and until the springs and the main aqueduct are again operating at 100% efficiency. Units containing large numbers of men frequently move into buildings or establish residential camps, in places where the existing mains are too small to afford proper supplies. There are serious difficulties and complaints. (The Regional Engineer suggests that if Units would be more careful to consult his Department before taking over buildings, on this question, there would be less trouble.)

(h) Other works.

There was some damage to the main-drainage system, which is still under repair. Banks defining the River Tiber were broken and damaged in several places; reconstruction is in hand.

(i) Materials.

All repair works have been hampered by shortage of cement, asphalt, oxygen and other things.

It is hoped that schooners of 50 tons will be able to use Fiumicino port shortly, where the canal and harbour are now under repair and 15 small sunken vessels are being raised. A plan was made for the removal of enemy mines in Rome Region area generally and this is being carried out.

(j) Miscellaneous.

About 650 people are employed on normal maintenance of gardens and parks in Rome, but only 13 horse drawn vehicles were available and no motor transport. For refuse removal about 1200 people are employed, this work also gravely impeded by having only 26 available and no motor vehicles.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(k) Mines (clearance).

An Italian mine clearance unit began work about mid-June, and at the end of July were working in the Lido di Roma area. Two of the men have been killed, leaving 36 at work.

12. REGION V (Regional Engineer Lt-Col. Latimer).

(a) Territorial Changes.

Region V now includes Ancona but physically the Eighth Army retained full control over that Province and also Macerata, immediately south of Ancona. Foggia Province was taken out of Region V to operate as a special entity, with public works in it under the control of separate Engineer. One officer, a captain, has been left in Foggia Province to assist in the still remaining heavy work there on highways and bridges. Campobasso Province was returned to Italian Government control, though remaining within Region V. Regional headquarters moved forward to Aquila but public works officers had been working from forward positions for some time previously. This saved considerable time through reduced travel distances.

(b) Highways and Bridges.

In July there were no changes in the priority lists concerning military highways. Route 16 along the coast remains a first priority. The Regional Engineer expresses surprise that Routes 5 and 17 have not been dropped from the military priority list. He expected to get a revised list from the Chief Engineer, (Brig. Lindsay) within a few days. From a supplies standpoint as distinct from purely military requirements, certain lateral highways were being studied in order to re-establish those lines, either by temporary bridges, road diversions, or other expedients. In Macerata Province more than 100 bridges reported destroyed. Highways and bridges work occupied so much time in July that little attention could be devoted to other classes of public works except that of a temporary housing scheme for Isernia (Campobasso Province).

(c) Electricity.

Destruction of the Terni group of hydro-electric stations presented serious problems particularly in Aquila, which was largely dependent on Terni. In the meantime an allotment of 400 KW from elsewhere was received, subject to withdrawal at any time since Ancona may need this energy later. Major Bennett is specially mentioned as having done exceptional work in connection with both electricity and water supplies.

Other Works.

Surveys of several cement plants, brick works, etc. were undertaken with a view to giving them electricity and getting them back into production. Water supply problems were acute throughout the northern part of Region V, the Genio Civile being instructed to give this the highest possible priority at many places, up to the point where at least an absolutely minimum supply could be made available.

Damage to drainage and storm water sewers was extensive particularly in Pescara, where bomb damage caused basements to be flooded with sewage and open drainage ditches were over-flowing. In the hot weather of July this was par-

Declassified E.O. 12356 Section 3.3/NND No. 788019

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Damage to drainage and storm water sewers was extensive particularly in Pescara, where bomb damage caused basements to be flooded with sewage and open drainage ditches were over-flowing. In the hot weather of July this was particularly dangerous to health; remedial measures were further complicated by the presence of numerous mines and booby-traps. As to gas-works, no attempt has been made to re-operate though in Pescara a stock of gas coal was found.

Declassified E.O. 12356 Section 3.3/NND No. 785019

13. REGION VI - SARDINIA. (Regional Engineer, Capt. Smith).

(a) General.

The situation in Sardinia was dealt with in some detail in recent monthly reports of this Sub-Commission and there is little of special interest to add concerning activities in July, though steady progress is reported in most directions.

Major Spann was transferred from Sardinia to become Regional Engineer of Region IX as from 11 July. Capt. Smith took his place. The latter is now the sole representative of the Public Works and Utilities Sub-Commission, with special responsibility for the heavy clearance and reconstruction work still going on in Cagliari, and a general responsibility for works in hand over the rest of this very large island.

(b) Highways and Bridges.

No important change. Three roads have been resurfaced providing access to Airports, to a military hospital, and to various U.S. and Ordnance dumps. Roads used by military vehicles through Cagliari have been fully cleared and repaired. As noted in previous reports secondary and inter-communal highways are deteriorating rapidly, due to shortages of bitumen and other repair materials. The head of the Genio Civile (Sig. Buttini) visited Rome in July to consult with his Ministry, and on his return transfer of the responsibilities of the A.A.S.S. to the Genio Civile was put actively in hand.

(c) Buildings.

A comprehensive scheme for reconstruction of damaged school buildings etc. in Cagliari was approved in June, in connection with the Provincial Commissioner who urgently desired action to be taken. Street repairs in the city made considerable progress. In Cagliari debris had been cleared by the end of July to the extent of 63%, with demolition and clearance of particular sites to the number of 12, 6 in progress, and 38 remaining to be started. Six works of sewer repair were finished and two remained in hand. Buildings such as markets, slaughter houses, public latrines and also buildings belonging to the Municipality of Cagliari were put in hand.

The position regarding electricity referred to in previous monthly reports showed no change; figures furnished of the precise quantity of water now available (storage) at the hydro-electric reservoirs.

(d) Miscellaneous.

The water situation in Cagliari is likely to become critical by October. The Municipality has permitted gross wastage of water and it is necessary now to put on them very considerable pressure in the direction of a rationing scheme, and drastic steps to reduce losses. The Regional Commissioner (Brig. Carr) had interested himself closely in the matter and was assisting the Regional Engineer to the maximum by administrative action. (A complete technical report dated 20 July 1944 is furnished, but need not be dealt with here. In a technical and engineering sense the matter is complicated. It is being studied by Major

Declassified E.O. 12356 Section 3.3/NND No. 785019

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The point is that the Allied garrison in Cagliari has imposed on itself a strict water rationing system, whilst the local authority has not imposed such a system as yet on the public.

As previously reported, the gas-plants at Cagliari and Sassari remain inoperative through lack of coal and, to a minor extent, lack of repair and material. Some tramway services in and around Cagliari continued, but they are bound to be reduced to something even smaller in the near future through lack of certain essential materials.

Declassified E.O. 12356 Section 3.3/NND No. 785019

The clearance of Cagliari City has been slowed down by the departure of military transport (of the Italian Army) to the mainland. Transport generally for engineering and structural materials is becoming progressively worse because vehicles either have no pneumatic tires, or are using old tires that give continual trouble.

As to materials, the Island has sufficient supplies of cement, bricks and tiles; a glass factory is under construction now at Cagliari, where certain raw materials are available.

11. REGION VIII. (Regional Engineer Major Chamberlin.)

(a) General.

The new Inspector General of the Genio Civile (Calabria Competence) was very active in July in organizing his engineering staff to deal with, and in some cases solve, present restrictions on controlled and critical materials (steel, timber, cement). The recently appointed Minister of Public Works (Signor Mancini) visited Calabria during the month and conferred with the principal Genio Civile officials; he stressed the point that rehabilitation and housing problems, if they are to go ahead, must be restricted to schemes for which there are local supplies of materials.

Captain Brownlee was transferred to Region VIII and in his place Major Chamberlin engaged an Italian engineer who is proving satisfactory. (A constant difficulty is in making arrangements for him for food and lodging, on necessary tours of inspection.)

(b) Highways and Bridges.

No change in military priorities. At the end of July heavy repairs were in progress on 62 km. of road, with minor repairs on 430 km. Six bridges were being rebuilt viz. Argitola, Molina, Amato, Petrace, Virtu and at Bisiliom. Normal progress on all these except the one at Virtu. Tenders being invited for another bridge. Value of work in hand at end of July on military highways and bridges amounted to 36.5 million lire with disbursements already made 9.5 million lire.

On secondary highways approvals were given to an expenditure of 0.75 million lire, this including two large retaining walls and the widening and improvement of a curve on Route 19. Repairs on the Neto River Valley Road progressed to the point that traffic time was reduced to half of what it was before. Further schemes amounting to over 2 M.L. for secondary roads and bridges were under consideration.

(c) Buildings etc.

Projects numbering 16 were approved, estimated total cost 3.4 M.L. This includes extended accommodation for the prison at Reggio Calabria required by Public Safety Sub-Commission. (This was referred to in the June Report, perso-

Declassified E.O. 12356 Section 3.3/NND No. 785019

11. REGION VII. (Regional Engineer Major Chamberlin.)

(a) General.

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Captain Brownlee was transferred to Region VIII and in his place Major Chamberlin engaged an Italian engineer who is proving satisfactory. (A constant difficulty is in making arrangements for him for food and lodging, on necessary tours of inspection.)

(b) Highways and bridges.

No change in military priorities. At the end of July heavy repairs were in progress on 62 km. of road, with minor repairs on 130 km. Six bridges were being rebuilt viz. Angitola, Mesima, Amato, Petrace, Virtu and at Bisillico. Normal progress on all these except the one at Virtu. Tenders being invited for another bridge. Value of work in hand at end of July on military highways and bridges amounted to 36.5 billion lire with disbursements already made 9.5 billion lire.

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(c) Buildings etc.

Projects numbering 16 were approved, estimated total cost 3.4 M.L. This includes extended reconstruction for the prison at Reggio Calabria required by Public Safety Sub-Commission. (This was referred to in the June report, paras. 6 and 15). Other building works included a hospital, school, two government buildings, one group private houses and two special demolition works.

(d) Anti-Malarial measures.

This was referred to in para. 15 June report. Excellent results are reported, with cases of malaria much below those of the last 2 years.

(e) Electricity.

6461

Cuts in the allotment of energy for July coupled with extreme drought made the situation serious. In order to stay within the given allotment, drastic measures were taken, viz. refusal of all applications, cutting off power consu

Declassified E.O. 12356 Section 3.3/NND No. 785019

who had not made application by 15 July and all electrical heating units consuming more than the 200 units per month; cutting off of electricity at various periods of towns for many hours daily.

The Montecatini industrial plant produces hydrogen for the R.A.F., and for this purpose requires about 300,000 units per month. The works also produce super-phosphates, and a little under 2,000 tons of this per month would increase the electrical demand to 1.3 million units monthly.

(f) Materials and Transport.

Demands for cement had not been met except on bridges (military highways) even several weeks after application had been made. The transport situation for structural materials remains even more serious than was indicated in the last part of para. 15, June report. Three trucks taken away by the Italian 31st Army Corps in June were not returned, 5 trucks are completely out of operation due to tire shortage. To cover the great distances in the Region, with its numerous engineering activities, the Regional Engineer reports there are now only 5 trucks available.

15. REGION VIII (Regional Engineer Major Lee, R.E.)

(a) General

Public Works activities were confined to the Fifth Army area and preliminary surveys were made (with approval of Fifth Army A.A.C.) in the Provinces of Livorno, Pisa and Siena. All work done has been subject to Army agreement.

Capt. Stevens (Electrical) replaced Capt. Kelly who was transferred after reporting sick. Capt. Brownlee (Highways) and Lt. Hodges (Public Works) joined the Region in the first week of July.

(b) Highways and Bridges.

Fifth Army A.A.C. asked the Regional Engineer to get the Genio Civile to work on Route 1 (coastal road) and the transverse highways Routes 73 and 74. Labour gangs of the Cantonieri were re-established. Engineer section of the Fifth Army have taken over responsibility for certain transportation and the supply of stone chippings and bitumen, and also the maintenance of some detours and temporary bridges. No representative of the late A.A.S.S. was found until the 23 July; this official was at once given definite responsibilities, under the Genio Civile. Plans and estimates being prepared for the reconstruction of 3 bridges on Route 74. The Regional Engineer reported that civilian contractors could not complete these other bridges within a short period of 30 days, and so the work was undertaken by the 92nd Engineer Battalion (American).

(c) Public Works.

Reconnaissances were made at 21 towns and essential repairs put in hand, often of a minor but essential nature. Mainly water-supply, sewers, and the clearance of debris. Temporary arrangements made for the pumping of water, prior to electricity being made available. The Genio Civile supervising staff found inadequate and the local Head was told by the Regional Engineer to increase the number immediately.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(d) Electricity.

No real start could be made on this problem until 17 July when Capt. Stevens arrived. Allocation of available power is being made on first priorities, working in with the Provincial Commissioner and the Supply Officer. There are coal mines at Ribolla, and certain mercury mines and others to which electric power is expected to be supplied shortly. Lardarello (where electricity is generated from "natural

Declassified E.O. 12356 Section 3.3/NND No. 785019

steam') and thermo-stations at Piombino and Portoferraio offer prospects of some supplies. At the first of these turbines and generators and transformers require repair, together with transmission lines. One unit giving 3,000 KW might be ready by 15 August and a similar one by 15 September. The other two had not been fully investigated by the end of the month. The Portoferraio plant is required by the Royal Navy for power at Leghorn. Further reports will be submitted.

Close contact was maintained with the Manager of the Soc. Elettrica di Valdarno in Siena, and the Company is being assisted in the re-establishment of transmission lines at various points and in the bringing in of 2,000 KW to Siena City from Nero Montoro. Small hydro electric plants were being investigated and a sub-station at Siena was under repair.

16. REGION IX (Regional Engineer Major Spann).

(a) Remarks.

Major Spann (transferred from Region VI) opened an office at the temporary H.Q. of the Region at Orvieto on 14 July. From then to the end of the month he was engaged in collection and study of available data on the Region generally, together with attendance in turn at the Regional Engineers' meeting on 24 July where additional information was obtained from handbooks and records. The last five days of July were spent 'in the field' with Major Lee (Regional Engineer, Region VIII) in order to make contact with A.M.G. Fifth Army officers and to get first hand information as to how best to face various problems as they arise. Similar contacts with A.M.G. Eighth Army to be made early in August.

17. Fifth and Eighth Armies A.M.G.

The following are extracted from preliminary reconnaissance notes, furnished at various times during July:-

Fifth Army A.M.G.

(a) On 6 July Capt. Gaither reported that the main water aqueduct supplying Siena City was broken about the middle of June. City on reduced supply since then. Repair works well in hand under joint Genio Civile and A.M.G. (Public Works) supervision. Special fittings being cast in a foundry in Siena. Hoped that full supply of water would be available by last week in July. (Very high pressures in aqueduct militated against quick restoration.)

(b) Electric Power Sources at Valdarno near Florence cut by enemy on 27 June. Two transformers of 2,000 KW each, damaged. Telephonic request made to Force Area Command (Engineer Service) for a power supply over network, or for a motor-generator suitable for Siena.

(c) Report 14 July said that in Piombino repairs to water-supply and main-drainage were in hand. Steel works extensively damaged but large stocks of steel might be

Declassified E.O. 12356 Section 3.3/NND No. 784049

16. REGION V. (Regional Engineer Major Spann).

(a) Reports.

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(c) Report 11 July said that in Piombino repairs to water-supply and main-drainage were in hand. Steel works extensively damaged but large stocks of steel might be salvaged.

Provincial Commissioner reported that important mineral mines in Grossetto Province were practically undamaged except that the electricity supply had been destroyed. Mines producing lignite and pyrites: manganese and copper. Large stocks of raw materials found and quantities of equipment awaiting dispatch to Germany.

A.M.G. Eighth Army.

On 7 July reports received (period up to 30 June only) mentioned towns of

6469

Declassified E.O. 12356 Section 3.3/NND No. 785019

Marisciano and Citta della Pieve. The former with a population of 17.000 was undamaged, but water-supply under repair. At the second there was no electricity and mills were out of operation. On 25 July report received that Arezzo town was about 30% damaged with only 1,500 inhabitants left. No electricity. Water supply repairable to serve lower levels only. Otherwise wells would have to be brought back into use. On 2 August (position up to 28 July) reports stated that bridges would have to be rebuilt in Terni Province on the Orvieto Rieti Road.

In Arezzo Province the water aqueduct required repairs but the portions of it were still under fire of enemy. Electricity supplies, unlikely for a considerable time, complicates problem of milling grain. In Province of Florence the town of Castel Fiorentino was 20% destroyed, and 20% repairable. Population 15,000 of which only 150 remained in town. Water supplies out of operation and no electric light. In Perugia Province the town of Citta di Castello with a normal population of 35,000 was damaged about 20%, but repairable. Practically whole population remained in the town. No electricity for light or power, or for 3 mills. (This town normally receives electricity from the plant at Terni, destroyed by enemy.)

R.A. Lees

L.A. LEES,
Lt-Colonel, C.S.
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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L.A. JERMY,
Lt-Colonel, C.E.
Director.

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The CINCAL Delegation Brief

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HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

17 July 44

SUMMARY OF ACTIVITIES DURING JUNE 1944.

1. Remarks.

(I) The work of the Sub-Commission in June was marked, from the middle of the month, by a change of importance: viz. complete integration of all activities under the respective Regional Engineers. Specialist officers formerly on duty in different parts of Central and Southern Italy, working to a large extent in direct contact with Headquarters, were brought together in the various Regions under a single head, viz. the Regional Engineer. Hence, from the 15 June onwards that officer has under his control such widely diversified engineering projects as highways reconstruction, bridge design and construction, water-works, reclamation schemes and malaria control, gas-works, main drainage, canals and irrigation, buildings and structures generally, works in docks and harbors, and electrical problems with their various specialized features (including systems of rationing power-supplies). No single individual can be an expert in more than one or two of these, but an endeavour has been made to provide each Regional Engineer with a properly balanced "team" so that he may be in a position, though accepting responsibility, to hand over details of the problems confronting him to his various experts. He also has a senior Genio Civile engineer to assist, and to take executive action.

(II) Pages 2 and 3 of the May Report under the heading "Regions" set out the difficulties of the position as it had existed up to that time, viz. Public Works, both in policy and execution, were developing on wrong lines in certain Regions. There was absence of central control. There was a certain amount of overlapping coupled with divided responsibility and misunderstandings were arising as to whether this, that, or another Specialist Officer was responsible (in whole or in part) to the particular Region where he happened to be employed, or to the Headquarters of the Sub-Commission. The same paragraph of the May report also indicated how and why the position had arisen under which engineering control remained in divided hands. It is unnecessary to deal with that aspect in this report, and it is sufficient to say that early in June the Executive Commissioner approved, in general terms, the proposal of the Director of the Sub-Commission that its activities should, as far as possible, be coordinated and integrated under the various Regional Engineers.

(III) A conference of all Regional Engineers at Headquarters (arranged through Regional Commissioners) was held on 12 June, and

Declassified E.O. 12356 Section 3.3/NND No. 785019

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(III) A conference of all Regional Engineers at Headquarters (arranged through Regional Commissioners) was held on 12 June, and was continued on the following day in the form of more individual discussions on current problems. There was full discussion at the meeting. A uniform system of procedure was agreed on as to control of specialist personnel (e.g. general Public Works, electrical, highways and bridges and so on) and as to responsibility for equipment handed over in considerable quantities by the Armed Forces for the special task of rehabilitation of military highways and bridges; also concerning heavy engineering equipment shortly expected from the U.S., which is estimated (as to dead-weight alone) to be of

6499

Declassified E.O. 12356 Section 3.3/NND No. 785019

the order of 3500 to 4000 tons. Maintenance and use of it by the Italian Genio Civile were discussed. Regional Engineers were asked to do everything possible to save the time of the Genio Civile engineers, in their respective Regions, by ensuring that plans, calculations, and estimates are only prepared for projects that (by reason of their nature and urgency) have a chance from the time of their initiation of receiving final sanction.

(IV) As to this the Genio Civile had complained, and with justification, that in recent months Civil Affairs Officers and Provincial Commissioners and in some cases Italian officials of other Departments, had insisted on the preparation of projects in detail merely because they themselves had a particular interest in getting a certain scheme through. A duty is now laid on the Regional Engineer to protect the Genio Civile from this wasteful procedure, and to "screen" the various projects in their early stages after discussing them with the Regional Commissioner on the one hand, and with the appropriate representative of the Armed Forces on the other. By this means only the most essential projects will find their way through Italian channels to the Minister of Public Works for sanction; or, in the case of numerous projects involving the use of controlled or critical structural materials, for final approval at the H.Q. of the Sub-Commission. In the latter case it is customary, needless to add, for the head of the Sub-Commission particularly concerned to be consulted.

(V) A systematised form for the submission of Regional Engineers' monthly reports was worked out, and also uniform procedure for obtaining supplies, plant, and materials. As to the latter, if there are adequate reasons for going ahead with a particular scheme and both labour and materials are available locally, Regional Engineers were instructed to carry on; subject, of course, to an undertaking from the Italian side to finance it. As to controlled materials application will be made on the proper forms (finally dealt with by Industry and Commerce Sub-Commission), whilst the H.Q. of this Sub-Commission will specially requisition materials or plant that may have to be imported. Warning was given that the latter class of imports may take weeks or months to obtain, hence the necessity to look well ahead. Contract forms and documents were standardized, and a miscellaneous number of other questions were clarified, including that of supplemental food rations to contractors' employees engaged on heavy manual work.

Generally the conference, the first of its kind, was of much value and it will be followed by others. The next one has been provisionally arranged for the 24 July, and will probably take place in Rome.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Generally the conference, the first of its kind, was of much value and it will be followed by others. The next one has been provisionally arranged for the 24 July, and will probably take place in Rome.

(VI) Since the date of the new organization (15 June 1944) there has already been a marked change for the better, i.e. a diminution in the mass of detailed work that has had to be dealt with at H.Q., often by senior officers, whose time can now be profitably given to more important matters whether of policy, finance, or of an essentially technical nature. Further, and perhaps of even greater importance, the new system will enable the four senior officers at H.Q. to get away on much more frequent tours of inspection. For too long a period they have, in a way, been "chained to their desks".

Declassified E.O. 12356 Section 3.3/NND No. 785019

Changes indicated in the May Report under which Lt.Col.LAPPER took over control of Public Utilities in addition to his responsibilities in the field of electrical engineering, and Lt.Col. THOMPSON responsibility for military highways and bridges in addition to general public works, are working well and will continue. These officers have two or three specialist engineers at their immediate disposal, available to go out at any time for investigations, or to give assistance to any Regional Engineer requiring them. Another advantage arising from decentralisation has also been a diminution in the number of subjects for discussion at frequent meetings with Sig. Tizzano (Director General, Italian Public Works Department) and with the Minister of Public Works.

(VII) The new Minister, appointed in May, is Sig. Mancini and he paid a call on the Director, accompanied by Sig. Tizzano, on the 23 June.

He was then in process of familiarising himself with the work of his Department, and did not seem to know much about it. This was unfortunate but understandable, and it may be that within a few weeks he will get the same grip of the situation as was achieved by his immediate predecessor, Sig. Tarchiani, who was only in office less than 2 months.

The new Minister appeared to have certain rather vague ideas about altering, or perhaps even reducing, the status and responsibilities of Sig. Tizzano. Secondly, he talked of the possibility of the re-establishment in the near future in Rome of a kind of " Superior Technical Council". Under the former regime, and perhaps even prior to it, this Council was composed of experts dealing with the more intricate engineering problems, according final technical approval to projects of major importance, and also questions of public works policy and finance.

As to the first of these it was made clear to the Minister that for a considerable time Sig. Tizzano, the present Director General, has been of the greatest possible assistance. He is competent, energetic, and has assisted in every possible way. It was made clear that any change in the status of this official would be regretted. As to the second point, the Minister was told that in the present state of his Department, which is only now slowly emerging from a state of complete chaos, the re-establishment of a Superior Council (under whatever name) is unnecessary. He was told that the HQ. of this Sub-Commission does, in fact, take the place of any such Council both in theory and in practice. And that if efficiency is to be restored and urgently needed public works and repairs projects (these needed on a vast scale) are to go ahead expeditiously, we would wish to deal with nobody other than he himself (the Minister) and with Sig. Tizzano.

The Minister did take energetic action in more than one [illegible] following the meeting on 23 June. Specific and well-

Declassified E.O. 12356 Section 3.3/NND No. 785019

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The Minister did take energetic action in more than one direction, following the meeting on 23 June. Specific and well-founded complaints, supported by documentary evidence, having been furnished to him concerning the unsatisfactory conduct of certain minor officials, he despatched telegrams dismissing them from the Service within two or three days.

(VIII) Para 2 of this report gives lists of officers as on the 30 June 1944, together with comments at the end indicating transfers or alterations contemplated. It will be seen that there have been changes since May. Officers shown at H.Q. and on temporary duty

Declassified E.O. 12356 Section 3.3/NND No. 745019

elsewhere, para 2 (a) are reduced, and para (2) is increased, i.e. Regional Staffs.

The numbers shown are 20 and 41 respectively, giving a total of 61 as on 30 June 1944. Personnel questions took up a large amount of time in June, due to the rapid moves of the Armies and advanced planning for the new Regions. (Mr. Grady made it clear at two recent conferences that no additional military personnel can be expected, but there is a possibility that civilian experts may be recruited and sent to Italy.) On the 11 June the Executive Commissioner provisionally allocated, following discussions with the Deputy-Director of the Sub-Commission, a basic minimum of Engineer officers to cover the whole of the 12 Regions together with Rome, i.e. on the assumption that the number then existing might not be increased.

This entailed a drastic reduction in certain Regions that have been long established, almost below the safety margin. A second assumption, laid down by the Executive Commissioner, was that Public Works officers now with A.M.G. 5th and 6th Armies may eventually be available for the staffing of the Regions.

Towards the end of the month (June) officers additional to the two already assigned to Region VIII were being asked for, together with officers for the setting up of Region IX.

Provisionally, the total number of engineer officers is put at 74, with about 60 in the Regions, more or less, and the balance at H.Q.

2. Nominal Roll of Officers.

(A) At Headquarters, and on temporary duty elsewhere:-

Lieut-Colonel L.A. Jenny, C.E.	(A) Director, Sub-Commission
Lieut-Colonel G.E. Rhodes, R.E.	(B) Deputy Director, Sub-Commission

Public Works Division.

Lieut-Col. N.S. Thompson, R.C.E.	(B) Chief, Public Works Div.
1st Lt. R.W. Shepherd	(A) Asst. to Chief, P.W. Div.
Major R.W. Hyland	(A) P.W.O. South.
Major C.L. Hasie	(A) P.W.O. North.
Capt. W.R. Gentry	(A) Awaiting assignment to Requisition Div.

Utilities & Adm. Div.

Lieut-Col. W.M. Lapper	(B) Chief, Utilities & Adm. Div.
Capt. D.W. Laughlin	(A) Asst. to Chief, Util. & Adm. Div.
Major H.E. Westrope	(B) [illegible]

Declassified E.O. 12356 Section 3.3/NND No. 789019

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Utilities & Adm. Div.

Lieut-Col. W.M. Lapper	(B) Chief, Utilities & Adm. Div.
Capt. L.W. Laughlin	(A) Asst. to Chief, Util. & Adm. Div.
Major H.W. Westwood	(B) Headquarters.
Capt. E.H. Rogers	(A) T/D Rome Region.
Capt. A.D. Preedy	(B) Headquarters.
Lieut.C.W. Atkins	(B) Headquarters.
Major M.O. Wooster	(A) Elec. Util. Officer.
Major E.J. Berry	(A) HQ., att. P.B.S.
Major V.S. Renton	(A) HQ., att. Palermo.
Capt. H.J. Rosson	(A) T/D Region IV.
Capt. R.A. Ryan	(A) Elect. Util. Officer, South.
Major H. Larson	(A) T/D Region IV.
Major R.A. Boll.	(A) Elect. Util. Officer.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(B) On present information and subject to correction the following Public Works Officers are permanently assigned to Regions as shown:

Region I.	Lieut-Col. C.P.Bolick	(A) Regional Engineer Officer.
	Major D.A. Boyd	(B) Public Works Officer.
	Major A. Crowther	(B) Elec. Util. Officer.
	Major W.H. Gamble	(B) Highways.
Region II.	Major W. Knight	(B) Regional Engineer Officer.
	Lt. J.W.L. Butcher	(B) Elec. Util. Officer.
Region III.	Lt-Col. L.J. Hanley	(A) Regional Engineer Officer.
	Major L.R. Denning	(B) Public Works Officer.
	Capt. R.P. Woober	(A) Highways.
	Capt. R.N.J.Hibbard	(B) Highways.
	Capt. E.B. Feldman	(A) Highways.
	Capt. A.G.A. Saul	(B) Highways.
	1st Lt. P.A.Sforzia	(A) Elec. Util. Officer.
Region IV.	Colonel E.J.Edwards	(B) Regional Engineer Officer.
	Lt-Col. G.de G.E. Findlay	(B) Public Works Officer.
	Major A.G. Evans	(B) Public Works Officer.
	Capt. T.P. Spriggs	(A) Public Works Officer.
	Capt. J.F.C.Wilson-Heathcote	(B) Public Works Officer.
	Lt-Col J.B. Breth	(A) Attached from Rome Region.
	Capt. P.R.C. Stephens	(B) Attached from Rome Region.
	Major A.G. Perley	(B) Highways.
	Capt. T.R. Brownlee	(A) Highways.
Rome Region.	Lt-Col. C.R.Birchett	(A) Engineer Officer.
	Major A.E. Michel	(A) Public Works Officer.
	Major G.P. Buckley	(B) Public Works Officer.
	Major J.C. Rively	(A) Public Works Officer.
	Capt. E.M. Gaither	(A) Public Works Officer.
	Lieut. E.D. Wade-Brown	(B) Elec.Util. Officer.
Region V.	Major C.A. Latimer	(A) Regional Engineer Officer.
	Major J.E. Fodon	(B) Public Works Officer.
	1st. Lt. J.H. Walsh	(A) Public Works Officer.
	Major J.S. Bennett	(B) Elec. Util. Officer.
	Major G. Boucher	(B) Highways.
	Capt. J.L. Lambie	(B) Highways.
	Capt. R.M. Walker	(B) Highways.
Region VI.	Major W.M. Spann	(A) Regional Engineer Officer.
	Capt. E.E. Smith	(A) Public Works Officer.
Region VII.	Major W.F. Chamberlin	(A) Regional Engineer Officer.
Region VIII.	Major P.G.L. Lee	(B) Regional Engineer Officer.
	Capt. P.D. Kelv	(A) Elec. Util. Officer.

Declassified E.O. 12356 Section 3.3/NND No. 785019

	Capt. A.G.A. Saul	(B) Highways.
	1st. Lt. P.A.Strolia	(A) Elec. Util. Officer.
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Region VIII.	Major P.G.L. Lee	(B) Regional Engineer Officer.
	Capt. P.D. Kalv	(A) Elec. Util. Officer.
	Lt. L.J. Hodges	(B) P.W. Officer.

Remarks.

(a) Major W.H. Gamble (B) assigned to Region I as Highways Officer.

(b) Capt. R.N.J. Hibbard, Capt. B.B. Feldman, Capt. A.G.A. Saul and Capt. R.P. Weaber assigned to Region III as Highways Officers.

(c) Lt.Col. J.E. Breth, Capt. P.R.C. Stephens attached Region IV

Declassified E.O. 12356 Section 3.3/NND No. 785019

pending assignment from Rome Region. Major A.G. Pooley and Capt. T.R. Browsley assigned to Region IV as Highway Officers. Capt. E.E. Rogers attached Rome Region pending assignment.

(d) Major G. Boucher, Capt. J.L. Lambie and Capt. R.E. Walker assigned to Region V as Highway Officers.

(e) Major P.S.L. Lee, Capt. P.D. Muir and Lieut. L.J. Hodges assigned to Region VIII as Regional Engineer, Fleet Utility Officer and P.W. Officer respectively.

(f) Capt. R.A. Ryan now assigned this HQ. from Region III.

(g) Major R.A. Bell (A) reported this HQ. awaiting assignment to this Sub-Commission.

(h) Major H. Larsen, Hydraulic Engineer, loaned to Region IV (Pontine Marshes).

3. Rome.

(I) The position as it stood at the end of May was outlined in Para. 3 of the report for that month. Somewhat conflicting reports were received in the first half of June concerning the condition of engineering services and public utilities, and more particularly water and power supplies (electricity). The latter was emphasised by a special signal from the 5th Army on the 12 June to H.Q. A.A.I., with a copy to A.C.C., stating that they were concerned about the need for a proper system of electrical rationing, i.e. the elimination of power and other users of current not essential to the war effort, so that supplies might be available for military needs, for the functioning of public utilities (e.g. water pumping, sewage pumping, trams and railways) together with certain essential war industries. (The way in which this rationing has been operated for some months in Central and Southern Italy was indicated in Para. 6 of the Sub-Commission's May Report, and in greater detail in the April Report: these may be referred to.)

(II) Accordingly, Lt. Col. Jenny (Director) and Lt.Col.Lapper (Utilities and Administrative Division) together with Sig. Tiussano (Director-General, Italian Public Works) visited Rome between the 18th and 22nd June. There were conferences at the Ministry of Public Works, and at the H.Q. of Rome Region and Region IV. There were also meetings with Lt.Col. Cockerton, the British C.R.E. A certain amount of misunderstanding and overlapping was found to exist concerning executive control of the City's engineer services and public works generally, and an effort was made to arrive at a regular system. A joint control with regard to electric power, water and highways was provisionally arranged as between the engineers for the time being of the Rome Area, A.C.C. and the C.R.E.(British). Since the A.C.C. has positive and clearly defined responsibilities

Declassified E.O. 12356 Section 3.3/NND No. 780169

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The following matters are of interest :-

(a) Owing to damage to hydro-electric stations and power transmission lines there was a "serious shortage" of electricity. Rome was largely isolated from transmitted supplies, and dependent on one Diesel and two thermal stations (coal, steam-driven) in the City. These provide only about 30.000 KW, or 1/3 of normal requirements. Arrangements are being made to increase output to 40.000 KW by certain inter-connections between boiler-houses at the power plant.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(b) Initial steps were taken to set up a rationing scheme for power and lighting with a nucleus of specialist officers.

(c) Region IV engineering staff was reinforced from this H.Q. by specialist officers to deal with water supply problems (outside the City Area), and with problems of land drainage in the Pontine Marshes.

(d) The Central Electrical Board having moved to Rome, and also H.Q. A.A.I., Lt-Col. Lapper returned permanently to Rome at the end of June in order to take charge of the urgent electrical and other public utility problems.

(e) Dredgers were sent down to the lower end of Pontine Marshes to clear out blocked waterways, and arrangements made for extensive labour and equipment to repair dykes and embankments.

(f) Inspections were made of the thermal power stations near the City, but an attempt to inspect the hydro-electric plant northwards at Terni was frustrated because of damaged bridges, both on main and secondary highways.

(iii) Mention has been made in previous reports of the considerable preparatory effort involved in rebuilding the power transmission line from a point near Minturno, north of the River Garigliano, to Rome. (Refer to Para. 2 of the March Report, Page 7 of the April Report and Para.6 (g) of the May Report.) On 9 June a decision was arrived at by the Armies that the transmission line would not be needed, not being regarded now as an urgent military necessity. Work was accordingly suspended, and the large materials-dump that had been established at a point between Naples and Minturno is being held in reserve for other military purposes.

4. Tours of Inspection etc.

(i) The Director of the Sub-Commission twice made arrangements to visit Sardinia in June, but on each occasion it had to be postponed because of change of Minister (Sig. Torchiani had intended to accompany him) and because of more urgent matters requiring attention consequent on the taking of Rome.

(ii) In Para. 4 of the last report (May) it was noted that an inspection tour in the middle of that month to Campobasso, Foggia, Bari and Potenza had shown somewhat unsatisfactory progress in the reconstruction of military highways and bridges. Remedial measures mentioned in the last report have produced better results; though Sig. Tizzano and his superior engineering staff are still faced with many real difficulties. One thing is certain, and this is said with a full sense of responsibility, viz. a considerable body of civil engineers in the State service, men with high professional qualifications and with many years of specialised

Declassified E.O. 12356 Section 3.3/NND No. 785019

tensive labour and equipment to repair dykes and embankments.

(f) Inspections were made of the thermal power stations near the City, but an attempt to inspect the hydro-electric plant northwards at Terni was frustrated because of damaged bridges, both on main and secondary highways.

(iii) Mention has been made in previous reports of the considerable preparatory effort involved in rebuilding the power transmission line from a point near Minturno, north of the River Garigliano, to Rome. (Refer to Para. 2 of the March Report, Page 7 of the April Report and Para.6 (g) of the May Report.) On 9 June a decision was arrived at by the Armies that the transmission line would not be needed, not being regarded now as an urgent military necessity. Work was accordingly suspended, and the large materials-dump that had been established at a point between Naples and Minturno is being held in reserve for other military purposes.

4. Tours of Inspection etc.

(i) The Director of the Sub-Commission twice made arrangements to visit Sardinia in June, but on each occasion it had to be postponed because of change of Minister (Sig. Tarchiani had intended to accompany him) and because of more urgent matters requiring attention consequent on the taking of Rome.

(ii) In Para. 4 of the last report (May) it was noted that an inspection tour in the middle of that month to Campobasso, Foggia, Bari and Potenza had shown somewhat unsatisfactory progress in the reconstruction of military highways and bridges. Remedial measures mentioned in the last report have produced better results; though Sig. Tiedano and his superior engineering staff are still faced with many real difficulties. One thing is certain, and this is said with a full sense of responsibility, viz. a considerable body of civil engineers in the State service, men with high professional qualifications and with many years of specialised experience, are being paid on a salary scale so low that it may fairly be described as a mere pittance. These men are eking out an existence and keeping up appearances, for the time being, by drawing on capital or by selling their personal possessions. But for their loyalty to the service in which they have been employed for many years, coupled with perhaps the difficulty of getting other employment in present circumstances, it is remarkable that they are able to carry on their duties at all. The situation is paradoxical in that these men are being remunerated very little, if any, above the scale of wages earned by an ordinary artisan.

6455

Declassified E.O. 12356 Section 3.3/NND No. 785019

The matter of their salary scales and travel-allowances is one wholly for the Italian Government. But is is necessary to put on record, after many months experience, that if nothing is done for them their "esprit de corps", their initiative and keenness, and perhaps even their health will irreparably suffer. Whatever is done by the Italian Government will have to be on a reasonable and substantial scale. Continuance of the present unfortunate conditions acts as a strong brake on the efforts that this Sub-Commission had made, and is continuing to make, towards restoring the Italian Public Works Services to a state of reasonable efficiency.

5. Highways and Bridges (Military Priority Lists) and Public Works.

(i) At the end of May, 15 important bridges on main routes were under construction; and during June, 14 others were approved as to plans and designs, and contracts were let. Preliminary surveys show that an extensive bridge reconstruction program will have to be undertaken in the recently liberated territory east and north of Rome . Shortage of Bailey bridge equipment (portable) with the Armies will convert the problem into an extremely urgent one, since these Bailey bridges are continually having to be taken out and removed to areas farther north. Several of the larger bridges mentioned in previous reports, including the large bridge at Benevento, were practically completed in June.

I Peninsular-Base Section handed over to the Sub-Commission an additional 125 miles of State and Provincial highways (of military importance) during the month.

(ii) A short 2-day inspection trip, made by Lt.Col.Thompson and Major Hasle on June 25-27, revealed considerable damage on important roads east and north of Rome. South of Rome, however, Routes 6 and 7 are generally in considerably better condition than might have been expected. With the activation of Regions IV and VIII and shortly Region IX, plus the northward thrust in Region V, highway and bridge responsibilities are increasing rapidly but detailed information is not yet available. At the end of May quarries under direct operation numbered 8, making contractors independent of Army supplies of roadmaking material. In June another quarry was taken over at Grotta Minarda which will afford supplies for repairs on the important highway through Arienc.

(iii) A principal difficulty for some time has been not that of finding contractors of competence, but to find those with some engineering equipment. In recently liberated areas it is known there are numbers of new firms who can be called on, particularly in the vicinity of Rome. In Region V, where a large amount of work is contemplated, there is a shortage of local contractors as the areas are largely agricultural. It

Declassified E.O. 12356 Section 3.3/NND No. 785019

(i) At the end of May, 15 important bridges on main routes were under construction; and during June, 16 others were approved as to plans and designs, and contracts were let. Preliminary surveys show that an extensive bridge reconstruction program will have to be undertaken in the recently liberated territory east and north of Rome. Shortage of Bailey bridge equipment (portable) with the Armies will convert the problem into an extremely urgent one, since these Bailey bridges are continually having to be taken out and removed to areas farther north. Several of the larger bridges mentioned in previous reports, including the large bridge at Benevento, were practically completed in June.

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(iv) Some Regions, and particularly Region III, have had difficulty in keeping contractors transport supplied with petrol and the problem was intensified by the taking over of 80 -three ton trucks from District 3 (Army) for work on military roads. A similar number also handed over by District 2. They are being operated by the Genio Jivile under the Regional Engineers supervision. There have been other administrative difficulties apart

Declassified E.O. 12356 Section 3.3/NND No. 785019

from petrol supplies, but it is expected that they will be overcome shortly. In the meantime it is satisfactory to report that the transport situation is now greatly improved, and Italian personnel are being trained to handle the more valuable equipment expected shortly from the U.S.

(v) Midday meals continue to be served to their men by contractors, under the special arrangements made. The new supplementary ration cards are being generally used.

(vi) Up to the end of May the total value of contracts let was about 250,000,000 lire (as then reported), and by the end of June the figure had risen to nearly 350,000,000 lire. This includes over 6,000,000 lire of miscellaneous work, distinct from highways and bridges.

Additional Details.

(vii) Para.15 (A) of the May report noted that a more simplified system of returns from the Genio Civile had been arranged, monthly in arrear. They have done the best they can under the circumstances. Communications are poor, there is shortage of experienced personnel, and recent disorganisation if not demoralisation of the whole Service has even now only reached a state of"early convalescence". Returns submitted at the end of May, covering a 6 weeks period from 16 March to 30 April, dealt with only 5 Provinces in Central Italy and two in South Italy. For the latter area comparable information from 8 Provinces was missing, and also from Sicily and Sardinia. The following brief summary covers, therefore, only part of a much larger whole. A percentage probably not exceeding 25%. Nevertheless, even with its limited usefulness, it is interesting to note that :

(viii) In the 7 Provinces of Naples, Avellino, Benevento, Campobasso, Foggia, Potenza and Reggio there were some months ago 640 road interruptions on State and Provincial roads (the majority of these being outside the classification of " military highways"). These included anything from small or medium sized culverts under the roads, to bridges of complicated construction and with large spans. In the 2 Southern Provinces there were 150 such places of which 35 were large bridges, 25 medium, and 90 small (including the culverts) . By the end of April 71 had been restored and 29 were in hand, making a total of 100. In the 5 Northern Provinces mentioned, there were 490 such places, 99 large span bridges and 41 bridges of medium span (i.e. over 30 feet.) Of the 99 large bridges, 41 were under reconstruction at the end of April together with 90 of the others: a total of 131. At most of

Declassified E.O. 12356 Section 3.3/NND No. 759019

Additional Details.

(vii) Para.15 (4) of the May report notes that a more simplified system of returns from the Genio Civile had been arranged, monthly in arrear. They have done the best they can under the circumstances. Communications are poor, there is shortage of experienced personnel, and recent disorganisation if not demoralisation of the whole Service has even now only reached a state of "early convalescence". Returns submitted at the end of May, covering a 6 weeks period from 16 March to 30 April, dealt with only 5 Provinces in Central Italy and two in South Italy. For the latter area comparable information from 8 Provinces was missing, and also from Sicily and Sardinia. The following brief summary covers, therefore, only part of a much larger whole. A percentage probably not exceeding 25%. Nevertheless, even with its limited usefulness, it is interesting to note that :

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(ix) Only 9 of the larger bridges were of steel construction. Of the remainder more than 90% were in arch -masonry, and this is being followed in the rebuilding. A small proportion were in reinforced-concrete either in the form of girders or arches, but only 7 have been so rebuilt. In Central Italy 46 bridges have had

6155

Declassified E.O. 12356 Section 3.3/NND No. 785019

to be reconstructed temporarily in timber, and 9 in the 2 Provinces in South Italy.

(x) In the 5 Provinces during the 6 weeks period mentioned, 7 large bridges were finally completed, 12 medium ones and 76 of the smaller ones, including culverts.

(xi) On a length of 840 Kms. on 23 state roads in Central Italy, over 18.4 million lire were spent during the 6 weeks period, making a total of 47.5 M.L. since the beginning of the special repair works this year. In Avellino Province, 3.1 million lire had been expended up to the end of April, of which only a small fraction represented bridges. In Benevento Province, 15 million lire were spent in total, and nearly 8 million lire during the 6 weeks period; this was on 2 6 Kms. of roads, of which 64 Kms. had been fully reconstructed In Campobasso Province 3.8 million lire were spent during the period with a total of 6.8 million lire since the works started. Smaller sums were spent in Foggia Province; in Naples Province there was an expenditure during the 6 weeks of 18.6 million lire, nearly all on a total length of 216 Kms. of which 61 Kms. were finished by the end of April. (These figures include work on bridges).

(xii) In the 5 Provinces during the 6 weeks, over 27 million lire were spent on miscellaneous works, including buildings, and 20 million lire on debris clearance and the demolition of dangerous buildings. About 6 million lire were expended on works of " first aid repairs". By far the greater proportion of these classes of expenditure was incurred in Naples Province. On miscellaneous works 27 million lire were spent during the 6 weeks, Naples Province being responsible for about 25 million lire of this. The sum included over 10 million lire on anti-malaria control measures, 3 million lire on repair works following the Vesuvius eruption, and over 2 million lire on sewers-reconstruction.

(xiii) Since the beginning of the year in the 2 Southern Provinces mentioned, total expenditure was 13 million lire of which 9.4 were spent on bridges.

NOTE: The above details (vii) to (xiii) are only a 25% cross - section of one phase of works in hand, under the general control of Regional Engineers.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

4. Roads.

(i) Including the additional length of roads and bridges already mentioned, handed over by P.B.S. to the Sub-Commission in June, there were other lengths handed over by the 5th Army; total 775 miles.

(ii) The Minister of Public Works raised a question as to how far war damage repairs to privately owned properties might go, under approvals to be issued by his Department.

Our views (expressed to him) were to the effect that we saw no reason why these should not go ahead to a reasonable extent (since they have a direct bearing on morale and health) but that their execution must be conditioned by two things:-

(a) to be confined strictly to 'first aid repairs', and

(b) no item of controlled and critical structural materials to be used, e.g. steel, timber, cement, etc., except that in some cases salvaged material may be re-used.

(iii) Difficulty and dangers having been encountered by Regional Engineers, the Genio Civile, and their contractors through the presence of mines and booby-traps at various bridge and sites under reconstruction, the Director of Works, M.G., A.A.I. was addressed on the 14 June. To safeguard the position the Chief Engineer, at H.Q., A.A.I. (Major General) has laid down a specific procedure, and this is being communicated to all concerned. In addition Region IV, in a telegram dated 28 June to H.Q., A.C.C. stated that both harvesting and public works operations were being hindered by these mines. A letter was accordingly drafted early in July for the Executive Commissioner's signature addressed to all Regional Commissioners (Executive Commissioner's Ref. 155/37/GA) conveying the information supplied, together with diagrams and sketches showing the standard markings applicable to minefields.

(iv) During the month Capt. Feldman, engaged on highways and bridges with present location at Taranto, discovered in certain excavations the remains of a very Ancient Bridge, which appeared likely to be of historical and antiquarian interest. It communicated immediately with the Monuments and Fine Arts Sub-Commission who concurred, following an inspection by one of their experts. The full story is in the records of that Sub-Commission, and it is perhaps unnecessary to deal with it further in this report. Similar conditions may be found in future operations and Regional Engineers and their staffs are being instructed to exercise particular care in all excavation and foundation operations, and immediately to notify the M. and F.A. Sub-Commission.

(v) A special technical report was furnished to Romanis Scotti concerning a block of large warehouses in Naples (locally known as the M.I.T.E.R.) to resolve the difficulty about requisitioning by the Navies (R.N. & U.S.N.) and to allow a certain amount of heavy engineering repairs still to proceed for various transport undertakings in and around the City (viz. State railways, local railways, trams and tramway services.)

(vi) The Public Safety Sub-Commission called for additional accommodation to serve over 3200 prisoners, scattered over South Italy. They furnished priority lists and a general indication of their requirements. The schemes concern four Regions. Plans and estimates are now in preparation under the respective Regional Engineers and Genio Civile. One scheme has already been started (at Reggio Calabria).

(b) no lack of controlled and critical structural materials to be used, e.g. steel, timber, cement, etc., except that in some cases salvaged material may be re-used.

(iii) Difficulty and dangers having been encountered by Regional Engineers, the Genio Civile, and their contractors through the presence of mines and booby-traps at various bridge and sites under reconstruction, the Director of Works, A.M.G., A.A.I. was addressed on the 14 June. To safeguard the position the Chief Engineer, A.F.H.Q., A.M.G.I. (a Major General) has laid down a specific procedure, and this is being communicated to all concerned. In addition Section IV, in a telegram dated 20 June to A.F.H.Q., A.M.G. stated that both harvesting and public works operations were being hindered by these mines. A letter was accordingly drafted early in July for the Executive Commissioner's signature addressed to all Regional Commissioners (Executive Commissioner's Ref. /39/37/GL) covering the information supplied, together with diagrams and sketches showing the standard methods applicable to minefields.

(iv) During the month Capt. Feldman, engaged on highways and bridges with permanent location at Caserta, discovered in certain excavations the remains of a very ancient bridge, which appeared likely to be of historical and antiquarian interest. He communicated immediately with the Monuments and Fine Arts sub-Commission who concurred, following an inspection by one of their experts. The full story is in the records of that Sub-Commission, and it is perhaps unnecessary to deal with it further in this report. Similar situations may be found in future operations and Regional Engineers and their staffs are being instructed to consider particular care in all excavation and foundation operations, and immediately to notify the M. and F.A. Sub-Commission.

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(vii) Referring to Para.12 (b) of the Sub-Commission's April Report, which gave an outline of the position following the eruption of Vesuvius in March and a proposed expenditure of 370 million lire for remedial measures, the Genio Civile have not yet made up their minds about those parts of the schemes that are of pressing urgency, nor as to the sum of money immediately to be spent. Fuller details are awaited. In the meantime, mostly in April and May, the roads and streets were fully cleared of the deposits of ash and cinders, and also roofs that had been rendered unsafe by reason of the added weight of the deposits.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(viii) The Corso Vittorio scheme, referred to in Para.1, Page 2 of the key report is well in hand.

(ix) Previous reports mentioned the effort being made to induce the Ministry of Public Works (Genio Civile) to undertake a national scheme of Town Planning in various selected cities such as Messina, Catania and others, (and in the industrial and port areas of Naples. It would be regrettable if these places with very narrow streets, not at all suited to modern conditions, should be rebuilt in the way they have existed for hundreds of years. The problem is a major one, involving as it does immense legal questions of policy, Italian law, financial consideration, property rights, and similar things: all these distinct from the purely engineering and structural aspects.

Italy is far behind other countries in this matter, and probably lacks the type of amount (now possessed by most other countries) competent to deal with schemes of such complexity. It is recognised that it is no part of the work of A.C.C. nor of this sub-Commission to do more than make a few reasonable, and strictly practical, suggestions to the Italian authorities about it. This has been done, but little headway can be made with changing political conditions under which there have been 3 separate Ministers of Public Works in the last few months. Nevertheless, a beginning has been made by way of preliminary surveys showing on certain town-plans those areas that have been completely wrecked, together with other areas 75%, 50% and 25% damaged. This is a first and basic approach to the problem. Plans furnished are being examined, and it is hoped they may form a point from which some future Italian Government can take the action that is so desperately needed. We have done no more than attempt to "put the idea into their heads."

Declassified E.O. 12356 Section 3.3/NND No. 784509

Declassified E.O. 12356 Section 3.3/NND No. 785019

7. Damage to Public Utilities by Retreating Enemy.

The German practice is to make use of facilities available until the last moment, and then detonate explosive charges which have been placed in position for some time. With the exception of 2 steam-driven electric generating plants within the City of Rome, totalling about 30,000 to 40,000 HP, practically all generating stations both hydro-electric and steam-driven have been destroyed or seriously damaged. It is also their practice to destroy high - voltage sub-station transformers and equipment wherever these are adjacent to the power plants. There have been many instances where the enemy has removed copper-wire conductors and taken the metal away and a considerable number of transmission line towers have been destroyed. Curiously enough, however, aluminium cables have seldom been touched. Destruction by the enemy has usually been very through and systematic, the explosive charges being placed by experts familiar with power stations and their most vital spots. In some cases unbroken parts and pieces of equipment will have to be replaced completely. Hydro-electric stations will require complete generating sets, switchboards and cables. Sub-station transformers, oil circuit breakers and related equipment will be needed to control voltages from 150,000 volts downwards. There can be very little mass-ordering or mass-production for most of these things, since each unit or plant must be designed to suit a precise set of conditions, e.g. pressure of water under which plant will operate, volume of water, and many other things. An accurate estimate of the situation would require thorough study by a staff of competent engineers for any period up to 3 months.

The following gives an approximate average of war-damages as observed up to now in Sicily, South Italy and Central Italy :

	By Enemy	By Allied Operations
1. Electric Power & Light	90%	10%
2. Water	70%	30%
3. Gas	50%	50%
4. Main-drainage	50%	50%
5. Public Buildings & Factories	20%	80%

8. ELECTRICAL DIVISION.

(i) A considerable amount of work has been undertaken during the month. Hydro-electrical generating plant mentioned in previous reports has been moved from the Alta-Belice generating station near Palermo, Sicily, and arrived in Naples on 1 July 1944. This plant is being handed over to District III engineers who will complete the erection at -atese, now that the Eighth Army have moved forward. The plant was dismantled and shipped to the mainland under [illegible] of Major REWTON. There was considerable work in -

Declassified E.O. 12356 Sec. 3.3/NND No. 785019

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(ii) The project for the re-construction of the Naples - Rome transmission line was abandoned. A.C.C. and P.B.S. were to carry out this work and this Sub-Commission's already spent con -

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

~~considerable time~~ in arranging for the supply of materials, financing, and supply and feeding of civilian labour. It was discovered however, that the Rome electricity supply, (from the San Paolo and Monte Martini generating stations) was sufficient to most essential services and as the High Command considered the line was not now a military necessity, the project was abandoned. The material which is in considerable quantity and located in a dump near Naples will be utilised for other transmission lines, as required.

(iii) Arrangements for controlling supplies of electricity throughout Southern Italy are well in hand. Regular meetings are being held with the Italian Government Committees formed for this purpose, with Army Area Commands, and with the many power Companies involved. Regional electrical officers attend all meetings within their areas. More important meetings are attended by an officer from this H.Q. As the dry season has now commenced, it is necessary that a strict control be maintained on all supplies, so that available water in the reservoirs will last until the rainy season commences.

(iv) Meetings of the Electrical Committee of the Local Resources (Italian) Board were attended by Lt.Col. Lapper, who presented in graphical form the position of electricity supplies throughout Southern Italy. It was agreed by that Committee, on the recommendation of Lt. Col. Lapper, that in order to conserve water in the reservoirs the allocation of units should be reduced from 66 million KwH to 54.2 million KwH for the month of July 44. A careful watch on the reservoirs, and all allocation of electricity is accordingly being maintained. It is unlikely that the figure of 54.2 million units per month, the present consumption in Southern Italy, can be exceeded during the next 3 months. This, in effect, means that applications for new consumers, factory loads, etc. can only be accepted by cutting off present consumers on a lower priority.

(v) A meeting of the Anti-Inflation Commitee was held during the month which Lt.Col. Lapper attended and presented a report, as outlined above, pointing out that there will not be any additional electricity supplies available for new factories and that these can only come at the expense of existing factories.

(vi) On 18 June Lt.Col. Jenny and Lt.Col.Lapper visited Rome and stayed 3 days (see para.3 above, details). It was clear that the Rome Region, although they had 3 electrical engineers, required further assistance in order to deal with electricity rationing. Capt. Laughlin of this Sub-Commission proceeded to Rome on 25 June and is now developing a scheme for rationing which will assure supplies being provided for all essential services. Region IV required further assistance on water and main-drainage problems and Major Larson was sent forward on 17 June 44 (at present working in the Pontine Marshes area.)

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An officer of the Sub-Commission attended a conference called by the Economic Section in connection with the production of Sulphur in Sicily, since the sulphur mining operations are largely dependent upon electric power. Assurances were given that power will be available when needed, even if less essential users are curtailed.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Re-habilitation of the water supply of CAGLIARI (which also supplies the S.M.E. and the R.E.I.M.) - has made good progress. Works in hand under the direction of the Genio Civile have been periodically visited by an officer of this Sub-Commission. It was found necessary to assist the Genio Civile and its contractors by providing transport for materials.

Approval has been given for work on the restoration of the Simbirizio water works, which normally supply 24 Communes (300,000 population) but are at present out of operation owing to demolition of an elevated aqueduct.

GAS.

On account of the coal situation it has not been possible generally to extend production and distribution during the past month; nor has it been possible to restore more gasworks to operation.

Consideration is being given to the maximum possible use of Sardinian coal in gas production ; the matter is still under active investigation but it is feared that the further use of Sardinian coal will be so limited as to have little material effect in reducing imports of gas-coal.

PUBLIC UTILITY RATE ADJUSTMENTS - SUMMARY OF POSITION TO 30 JUNE 44

	Applications received for authority to increase charges.	Surcharges authorised	Referred to(and awaiting action by) Min. of Pub. Us	Awaiting; further date
Electricity Companies	12	9	1	2
Water Companies	1	4		
Gas Companies	4	2	2	

Note :

Fuller information regarding Public Utilities (electricity , water, gas , and main-drainage) is contained in Regional reports, herewith attached

REGIONAL REPORTS.

Declassified E.O. 12356 Section 3.3/NND No. 785019

GAS.

On account of the coal situation it has not been possible generally to extend production and distribution during the past month; nor has it been possible to restore more gasworks to operation.

Consideration is being given to the maximum possible use of Sardinian coal in gas production ; the matter is still under active investigation but it is f araid that the further use of Sardinian coal will be so limited as to have little material effect in reducing imports of gas-coal.

PUBLIC UTILITY RATE ADJUSTMENTS - SUMMARY OF POSITION TO 30 JUNE 44

	Applications received for authority to increase charges.	Surcharges authorised	Referred to(and awaiting action by) Min. of Pub. Uti.	Awaiting; further data
Electricity Companies	12	9	1	2
Water Companies	4	4		
Gas Companies	4	2	2	

Note :

Fuller information regarding Public Utilities (electricity , water, gas , and main-drainage) is contained in Regional reports, herewith attached

REGIONAL REPORTS.

9. Region I - Sicily .

(i) The head of the Genio Civile in Sicily had been reported for some months as an unsatisfactory official. The new one arrived in Palermo on 3 June, Sig. Russo, and early contacts indicate that he will be a great improvement on his predecessor. Under the revised system of procedure arranged at the Regional Engineer's Conference on 12 June, the Regional Engineer (Lt.Col. Bolick) approved a number of smaller projects in Sicily on which only local materials

6/52

Declassified E.O. 12356 Section 3.3/NND No. 785019

will be used.

(ii) Lists with description, location , and amounts of estimates covering 132 projects in Sicily are furnished. These cover some works going back to last November or December, but the majority of them have been approved and commenced in the last 4 months. The Regional Engineer's staff examined each project in detail before the Genio Civile began work. A considerable proportion are war damage repairs. Repairs to churches have only been carried out in cases where Monument and Fine Arts Sub-Commission have given special approval. In - vestigation of a new water scheme serving the town of San Cataldo in Caltanisetta Province was made, including a reservoir. The scheme started as an unemployment relief work. There is an allegation that 4.5 million lire were approved by Lt. Col. Poletti, but there appears to be nothing in writing. The scheme was initiated without the Regional Engineer's knowledge. Actual merits of the scheme appear to be doubtful, and also the question as to where the money is now to come from. Lt. Col. Bolick would have known nothing about it but for the - fact that he received (in June) an application for the release of 275 tons of cement. The project has been stopped for further investigations, technical and financial. Money spent to date is about 180,000 lire. Men working on the scheme are again unemployed. The Genio Civile and the Ministry of Finance express strive are now trying to get at the facts. Bridge works and repairs to public buildings in Caltanisetta Province were found to be proceeding satisfactorily.

(iii) In Enna Province contracts were given last autumn for the reconstruction of 59 bridges. The whole programme should be completed by the end of September. There have been delays because numbers of workmen are suffering from malaria. The Provincial Medical Officer has been asked for supplies of atebrine, so that the contractors can give regular doses to their workmen. Many rough estimates of cost for various schemes, prepared hurriedly in 1943, have been found to be under estimates. Supplementary estimates are constantly having to be prepared. The Prefect of Enna Province receives about 4 ½ million lire per month for the relief of unemployment,i.e. by the carrying out of public works. These are done by the Communes. The Genio Civile was unaware of this up to very recently, when it was brought to their notice by the Regional Engineer. The latter considers the system to be a poor one, since there is no competent technical supervision and it is open to many abuses; In the face of some resistance the Regional Engineer took action with the collaboration of the Provincial Commissioner, so that in future this money will be spent under some sort of technical and financial control.

Additionally the Regional Engineer visited also Catania and Syracuse. Work is proceeding normally on bridges and public buildings and there are no special difficulties.

(iv) District I (Army) left Catania on June 23 ...

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Additionally the Regional Engineer visited also Catania and Syracuse. Work is proceeding normally on bridges and public buildings and there are no special difficulties.

(iv) District I (Army) left Catania on June 11. This meant a falling off in the amount of Military transport available for public works, but calls of various kinds on the Regional Engineer and his staff may in the future be substantially reduced.

On a length of nearly 40 Kms. between Messina and Syracuse 9½ million lire are being spent on special road repairs and nearly 3 million lire on a length of 14 Kms. Three new bridge contracts were let.

Declassified E.O. 12356 Section 3.3/NND No. 759019

The disappearance of District I H.Q. has, the Regional Engineer reports, brought about a " marked change in the whole situation". Apart from transport curtailment, lists of priorities may be re-arranged and will be in different hands. The Regional Engineer had, by the end of June, decided not to encourage any further works involving heavy transport of materials, and particularly the use of cement. Concentration of effort will be confined to works actually in hand.

(v) As noted in previous reports, the Regional Engineer complains of the grave lack of initiative on the part of the Genio Civile in not acting for themselves in the requisitioning of vehicles for their own use, and in other ways. During June he succeeded in getting 9 requisitioned through various Prefects, a work in which he ought not to have been involved but on which considerable time had to be spent, mainly in overcoming difficulties placed in the way. On 17 June an army lorry proceeding to Catania and driven by an Italian civilian, employed either by the Genio Civile or one of their contractors, overturned on a corner due solely to reckless driving and excessive speed. Five of the workmen in it were killed and 26 had to be taken to hospital.

(Contact was maintained with the British C.R.E. regarding completion of new bridges, enabling Bailey bridges to be picked up and removed to forward areas.)

(vi) Complete figures given regarding electric power stations in the Island both hydro-electric and steam driven, figures of water power resources in reserve, actual coal consumption 26 May-25 June, and estimates of coal requirements for July, August and September, details also given of stocks in hand as to petrol, oil and lubricants. Summarizing these and expressing the position in KW-hours (units) Sicily requires about 16 million units of electricity per month, of which 7 millions is obtainable from water-power and 9 million from steam-driven stations. Sarrainian coal is being used to the maximum possible extent at the latter and 4600 tons were used in the 4 weeks period mentioned, together with 3300 tons of imported coal. Stocks of the latter were down to 2400 tons at the end of June. For July, August and September a total of nearly 20,000 tons of imported coal is estimated.

The Palermo (steam-driven) power station was almost fully repaired in June and also Catania station. Both these involved intricate welding processes and various improvisations, due to shortage of spare parts and materials. The similar power station at Porto Empedocle has been out of action for some time. It is larger than the Palermo one and repairs may be completed by the middle of July. Extensive repairs were completed in June to water-supply tunnels at the San Carlo hydro-electric station, the Catania thermal station having to be switched over to assist during certain hours of the night, the only time during which repairs could be carried out.

Declassified E.O. 12356 Section 3.3/NND No. 780019

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(vii) Tramway services in Catania have been restored almost to normal, and there is a fairly adequate service now running in Palermo.

(viii) Some months ago it was reported that the Catania gas - works were practically destroyed, along with those at Messina, but extensive and improvised repairs have now been completed to the point that some gas can be supplied during 6 hours out of 24. This consumes

6/51

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 780019

24 tons of imported coal daily, but it is not known whether even this can be maintained in the absence of a specific allocation of imported coal to Catania.

The Palermo Gas Works is the only one in the Island really in operation, with a daily coal consumption of 35 tons. About 90% of the city area has gas for cooking only, the supply being turned on morning and evening for periods of about 2 hours each.

(ix) The Island Base Section offered to the Regional Engineer 600 cu. metres of pine-logs which will considerably ease the timber shortage and enable more temporary bridges to be provided. As always, transport is reported to be a " great difficulty". Vehicles lately used on public works schemes have been withdrawn for the grape-harvest, part of which has this will continue for several weeks.

(10. Region II.

The Regional Engineer (Major T.Knight,M.C.) reports that owing to shortage of American and British Engineer officers, he is arranging to engage two qualified Italian engineers. For the supply of road-making material a large Firm of contractors employed by the Genio Civile were operating four quarries, but the output was only 60 tons per day of chippings against a daily requirement of 200 tons. The Regional Engineer found four additional crushers by consulting other firms, and the daily output has now reached 180 tons. Chief Engineer No 2 District was asked to allow a fifth quarry to be opened in a closed area; this was granted with certain restrictions and the quarry will be operating in July. A sixth quarry is also being opened at Altamura with two crushers obtained from the Army.

The Genio Civile presented a considerable number of road improvement and other schemes for approval, with estimates and complete data. Most of them were rejected on the ground that they have no military importance and supplies of bitumen, labor and equipment can be used to far better elsewhere. Commenting further on the quarries position and the maintenance of machinery for stone crushing and other purposes, the Regional Engineer, after recounting certain experiences, states: -"This responsibility should have been catered for. It now falls on my shoulders, making things more difficult due to shortage of staff. No use relying on the Italians to do anything expeditiously. One has to go out oneself."

The Chief Engineer No 2 District handed over four more lengths of Provincial roads (military priorities) owing to the changed military situation. On all highways previously on the list of military priorities progress in June was good. There has been fresh " releases" of bitumen and emulsion, and road services were in general being well maintained by firms of contractors, or gangs of " Cantonieri ".

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Two new bridge contracts were let in June in total value about 5½ million lire. Of seven other major bridge reconstruction works in hand, one was finished in June, four were 75% finished and one was reported as delayed owing to shortage of timber for forming the stone-arches. Apart from military highways, works were supervised on Communal and Provincial roads in Brindisi, Bari and Taranto Provinces. Some of these were undertaken at the special request of the C.R.E.

Details regarding the electric power position in Region II need not be gone into here, but various difficulties are indicated in

Declassified E.O. 12356 Section 3.3/NND No. 785019

in the Regional Engineer's report and these are being dealt with at the H.Q. of the Sub-Commission. They come on the opening up of a flour mills, pasta factories and similar places when the harvest has been got in, a large paper mill at Foggia, and the electric operation of certain railways. To keep these essential things going, in the face of stringently limited supplies of electricity available, is a matter of considerable perplexity.

Additionally, it is reported that the application of the electricity rationing Decree by Italian officials and Companies in Region II is unsatisfactory. (Remedial measures have already been taken by Lt. Col. Lipson, as far as possible). Over 2100 applications for continued power supplies were received from the Provinces of Bari, Brindisi, Lecce and Taranto and these are being carefully screened " so that those consumers whose operation is unessential to the war effort , or to vital civilian needs, can be eliminated.

Declassified E.O. 12356 Section 3.3/NND No. 785019

B.T.I, Printer, Washington, D.C. [illegible]
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to the war effort , or to vital civilian needs, can be eliminated.

6150

Declassified E.O. 12356 Section 3.3/NND No. 785019

11. Region III.

(i) In June four additional officers were assigned to the Region through the fusion of military highways, bridges, and electrical matters all under the Regional Engineer. Under the two first headings 80 additional projects were brought under him (Lt.Col. Hemsley). The area runs from a considerable distance north of Naples, southwards to Battipaglia and eastwards to beyond Avellino. In other directions there has been a loss of officers and enlisted men, and in view of additional responsibilities the Regional Engineer considers that on balance he is in a worse position (from a personnel standpoint) than he was before. Apart from Region I (Sicily) where there are many works in progress but of a different type and with less degree of urgency, Region III is perhaps the most heavily worked of the Regions at present from a Public Works and Utilities standpoint. Lt. Col. Hemsley made a special inspection of military highways and bridges in his Region immediately he accepted responsibility for them (in the middle of the month). He considered that progress made had been good and he found the highways generally to be "in good condition". Out of 27 bridge projects (ranging in cost from about 1 million to over 6 million lire each) three were almost finished, two more than half finished, and most of the others of smaller size will be finished by August or September. In four cases contracts had just been awarded, and in four cases plans and designs were still in hand. Four of the bridges are of such a size that they are unlikely to be finished till November or December.

(ii) Contracts for ordinary maintenance, heavy reconstruction or resurfacing of military highways numbered 57; 18 of these being in preparation and the rest works actually in hand. Works completed numbered 13. (Contracts range in the majority of cases from about 500,000 lire to 5,000,000 lire with one contract alone 12½ million).

(iii) Two important road-reconstruction works were in hand in Naples, one on the Riviera di Chiaia and the other on the Stella Polare. The first was nearly finished by the end of June, but the second has proceeded more slowly because the Regional Engineer has insisted on Utility Companies (gas, local railways, water, telephones and sewers) being co-ordinated with the road repairs, viz. he has insisted on all these services finishing their underground work prior to the road reconstruction contractor doing his. Within the last few months about 400 projects put forward by the Genio Civile in and around Naples have been approved, ranging from demolition and clearing of debris to the repair of public buildings. Practically all have been started and 35% of them completed. Some of the demolition work has been exceptionally difficult, e.g. the bombed Telephone Building, where very heavy slabs of concrete had to be removed with equipment wholly unsuitable.

(iv) Sewers and main-drainage in Naples City have been dealt with as a first priority work, and their clearance and reconstruction has been rigidly supervised and pushed ahead. The Regional Engineer worked in close contact with representatives of the Public Health Sub-Commission on this work, with the special object of countering mosquito-breeding and possible malarial infection.

(v) Under the heading Electricity over 650 applications for continued supply were received in total, of which 172 were rejected and 72 were sent to Sub-Commissions of A.C.C. for special consideration and advice. This strict rationing and supervision of each individual application has resulted in a consumption of only about

Declassified E.O. 12356 Section 3.3/NND No. 780019

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(iv) Sewers and main-drainage in Naples City have been dealt with as a first priority work, and their clearance and reconstruction has been rigidly supervised and pushed ahead. The Regional Engineer worked in close contact with representatives of the Public Health Sub-Commission on this work, with the special object of countering mosquito-breeding and possible malarial infection.

(v) Under the heading Electricity over 650 applications for continued supply were received in total, of which 172 were rejected and 72 were sent to Sub-Commissions of A.C.C. for special consideration and advice. This strict rationing and supervision of each individual application has resulted in a consumption of only about 450,000 units per day on the average, against 550,000 units provisionally allocated. There is a separate allocation covering Salerno, Torre Annunziata and Castellammare area, amounting to an average of under 300,000 units per day. A new 5,000 KVA transformer was installed at Torre Annunziata and by the middle of July the electrical load in that area will be considerably relieved. The Ilva industrial plant near Torre Annunziata requires an additional 400 KV, and from July onwards the transformer will enable it to operate on a 24-hour schedule, instead of being allowed to operate only during "off-peak hours".

(vi) Provincial tramways from Naples to Giugliano, Aversa, Trentola, and Albanova have been given permission to operate their routes during the same "off-peak hours". P.B.S. gave permission in June for the Naples tramways to be restored to operation provided heavy military traffic in the City was not interfered with. Extensive areas in the west of the City now have a tramway service. The reopening of these services would not have been possible apart from the strict rationing and conservation

Declassified E.O. 12356 Section 3.3/NND No. 780019

Declassified E.O. 12356 Section 3.3/NND No. 785019

the Genio Civile, the Municipality, and the [illegible] and equipment. Actually he has none at his disposal, [illegible] tinual borrowing from Army or other sources. The transport situation in Naples from Public Works standpoint is better than was reported in July. About 80 trucks have been assigned; a substantial help. The situation regarding tyres, however, is "deplorable" since vehicles used by the Utility Companies, by buses services and the civilian service mostly have tyres which are practically worn out. As to materials, recurring shortage of cement, bricks, stone and bitumen is now "an old story".

12. Region II. (Regional Engineer Col. Edwards).

(i) Shortly after arriving in Rome on 15 June, Region IV was notified that Rome Region would be permanently separated from Region IV, this resulting in several changes. Shortages of transport and MT/OR personnel was reported resulting in "waste of effort, time, and lower efficiency". Long queues of civilians asking for permits for vehicles for transport of public works materials etc., proved difficult to handle. Over 150 permits were issued.

(ii) Large numbers of roads where major damage did it is serious that 11 bridges cannot be rebuilt before the autumn rains make bituminous unusable. It was engineers have been called to have a quick survey made, starting on maps all under images. A priority list for repairs will then be drawn up. The army and requires Bailey bridges from provincial roads, and moving them afterwards without notification to the Regional Engineer: it is hoped to arrange for proper notification shall in the near future. "Contenders" have all to work and rubbish cleared by mid 1 Nov. Neglected stones were being cleared and general patching-up is recommended. On Route 5, five points only of Rose between 40 and 67 Kms. distant, a contractor was set to work to remove and repair obstructions. A detour at Km 67 was properly surfaced with stone so that it may be usable in the winter.

(iii) The Italian Government have made appointments of Public Works Engineers for L..io, Umbria, Littoria and Frosinone, and these 4 officials had been contacted and were being given every assistance. The Regional Engineer was a visit with these officials and had met most of their senior staffs. The army policy was not to grant permits to Italian civilians to go out north of Rome, but the Regional Engineer had pressed the urgency of getting these men out into the Provinces early, and also the directors and engineers of electricity and water companies. In every case Italian engineers had been given clear instructions as to what they were to undertake in the first instance, with special attention to water supplies, since many of the towns in June were closely using wells and springs that were polluted. In the area of the Gustav Line, these water conditions were particularly bad, and due in Frosinone, Gaeta Vinchiaro and Velletri areas. Within 2 weeks water and electric light had been restored at Anagni and some restoration of water supplies (at low pressure) in Littoria.

(iv) The Water Works were "hopelessly damaged". Restoration of the Rome water supply may cost 6½ million lire. At Frosinone, the water supply points in the town were being organized, feasible by using a well surround petrol-driven pump.

6149

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 745019

[illegible] to roads and bridges, in Bitonto Province. Some work was being carried out on [illegible] and "Immunerile bridges".

(vii). Information given as to public utilities with the remark that no rationing of electricity had yet been started; urgently needed, on similar lines to that obtaining linked in Naples and over South Italy generally. Considered that harvesting operations would be seriously impeded if present policy of cutting all current to go to Rome is continued.

(viii) Under the heading "corrida and plant contractors have very limited supplies, particularly tools and equipment. Many former large firms have gone.

(ix) The Regional Engineer gives information about road, rail and water transport and local communications (these will presumably be taken account of by other Sub-Commissions in their monthly reports).

(x) Finally, it is reported that "presence of mines and lack of personnel to remove them, is hindering every operation of restoration".

13. Region V.

Along with responsibility for military highways and bridges, the Regional Engineer (Major L. Dwyer) took over 5 officers who had been engaged on this work. Major Burley, previously in charge, had been transferred. Rapid expansion of controlled areas on the Adriatic side of Italy resulted in considerably extended activities. A general reconnaissance of roads in forward areas was made. Lateral roads east and west are in much better condition than the main roads north and south. Major Lehner is detailed to attend to this office to discuss and report on engineer officer (Major Perry) to enable as to be on the site of the more pressing problems. Both in Region V and Campobasso Provinces road and bridge works are proceeding, but the Army contemplates removal of many of the Bailey bridges (portable) on routes essential to administration and supply. This means the bridge reconstruction program all the more urgent. In Jute there was neither water, electricity, nor gas in Pescara. Following meetings with local Italian officials repair works were started and by the middle of the month the hospital was getting a supply of water. By the end of the month, it was hoped to have stand-post supplies at a few points in the streets of the town. Trunk-mains were destroyed and debris in the streets had to be cleared before the mains could be got at. Such mine clearance also had to be undertaken. In Chieti, the limited water service had been restored and at this town there was a small supply of gas. Limited supplies of electricity were expected both at Pescara and Chieti within a few days. Intensive efforts were being made by a number of the Regional Engineer's staff and a small number of Army Engineers. Electricity rationing in Foggia Province made some progress, many non-essential users being disconnected. An investigation of material and equipment required by mines at Campobasso (for A.C.C. Mining Div.) was made, and a recommendation of forward areas as to electric-power needs.

14. Region V - Perdinin.

The Regional Engineer (Major W. M. Upenn) stated that operations in Area had been mainly of a routine nature. From a comprehensive report, the following is a brief summary:-

(a) Conditions in the destroyed city of Cagliari were described in both the April and May reports of this Sub-Commission. By the end of June, with the City divided into Groups and Districts, it was estimated that the city had been cleared of debris to the extent of 25%. In the particularly military area of the city, clearance had reached 50%. Repairs were being started on some school buildings.

(b) Electricity production at both hydro-electric and steam-driven stations in the Island (from 26 May to 25 June) amounted to 10.9 million units. Certain re-arrangements of duty during the dry summer-season as between the two types of power stations were proposed.

(c) Water supply conditions are normal throughout the Island.

(d) There are certain highways of military importance used by the Allied Forces, mainly to supply airfields. Maintenance is by Italian Army Engineers whilst other highways (State, Provincial and Communal) are under the Head of the Genio Civile. The Regional Engineer works in direct contact with him.

(e) Gas works at Cagliari and Sassari, though undamaged, cannot be operated because of shortage of imported gas-coal.

(f) Certain local tram services in Cagliari have been restarted.

(g) The Head of the Genio Civile mentioned, Sig. Bottini, intended to come to the Mainland for a consultation with the new Minister of Public Works early in July, with a view to resolving certain administrative and technical difficulties and developing a general program of public works for Sardinia.

15. Region VII.

The Regional Engineer (Major Chamberlin) reported two changes in the local directing personnel of the Genio Civile in June; one as Ispettore to Generale, and the other to Eng. Capo (Reggio Calabria). Regional personnel generally have been reduced by approximately 40%, and military transport vehicles under Regional control from 27 to 7. This means that little or no help for public works and highways can now be counted on from that pool of transport. Capt. Brownlee had been in charge of military highways and bridges with H.Q. at Catanzaro since last June. Having been transferred, responsibility is now wholly on Major Chamberlin, who has no assistant. Efforts were being made locally to find one or two competent Italian engineers to assist him.

In Calabria, the Military Highways priority list remained the same. About 500 men were working on 8 special road contracts, these contracts ranging in amount from about half a million lire to 7 million lire each. Six other contracts were being let, including one for which fresh tenders were being invited owing to the original ones being considered too high. At the end of June heavy repairs were in progress on 40 kms. of road and ordinary repairs work on 440 kms. Bridges at Bagnara, Roccella and Cattolica were finished in June and four others were in hand at Anghiolo, Amato and other places. The removal of three land-slides on roads was also being undertaken. Exhibits against the special fund of 600,000,000 lire (allocated by the Italian Ministry of Finance last February) contracts let in Region VII (Military Highways) amounted to over 36,000,000 lire of which 8,000,000 had been actually expended.

Roads with asphalt surfaces are getting into bad condition through lack of requisite material. Roads in the vicinity of Crotone where harbour traffic is unusually heavy, need complete resurfacing. Communications have been kept open

Declassified E.O. 12356 Section 3.3/NND No. 785019

ces, [illegible] to small airfields. Maintenance is by Italian Army Engineers whilst other highways (State, Provincial and Communal) are under the Head of the Genio Civile. The Regional Engineer works in direct contact with him.

(c) Gas works at Cagliari and Sassari, though undamaged, cannot be operated because of shortage of imported gas-coal.

(d) Certain local tram services in Cagliari have been restricted.

(e) The Head of the Genio Civile mentioned, Sig. Boteini, intended to come to the Mainland for a consultation with the new Minister of Public Works early in July, with a view to resolving certain administrative and technical difficulties and developing a general program of public works for Sardinia.

15. Region VII.

The Regional Engineer (Major Chamberlin) reported two changes in the local directing personnel of the Genio Civile in June; one as Ispettorato Generale, and the other as Ing. Capo (Reggio Calabria). Regional personnel generally have been reduced by approximately 40%, and military transport vehicles under Regional control from 27 to 7. This means that little or no help for public works and highways can now be counted on from that pool of transport. Capt. Serralao had been in charge of military highways and bridges with H.Q. at Catanzaro since last June. Having been transferred, responsibility is now wholly on Major Chamberlin, who has no assistant. Efforts were being made locally to find one or two competent Italian engineers to assist him.

In Calabria, the Military Highways priority list remained the same. About 300 men were working on 5 special road contracts, these contracts ranging in amount from about half a million lire to 7 million lire each. Six other contracts were being let, including one for which fresh tenders were being invited owing to the original ones being considered too high. At the end of June heavy repairs were in progress on 60 kms. of road and ordinary repairs work on 400 kms. Bridges at Bagnara, Favazzina and Cattolo were finished in June and four others were in hand at Anglona, Amato and other places. The removal of three land-slides on roads was also being undertaken. Debitable against the special fund of 600,000,000 lire (allocated by the Italian Ministry of Finance last February) contracts let in Region VII (military highways) amounted to over 55,000,000 lire of which 8,000,000 had been actually expended.

Roads with asphalt surfaces are getting into bad condition through lack of requisite material. Roads in the vicinity of Crotone where lumber traffic is unusually heavy, need complete resurfacing. On mountain roads there have been many land-slides blocking them, and requiring urgent attention. Estimates put forward by the Genio Civile for repairing some public buildings were approved, including that for the prison at Reggio with extended accommodation - as to this, refer to para. 6 (vi) above. On the work of "bonifica" (anti-malaria) in Catanzaro Province a large gang of men is employed. The Head of the organization is reported to be very capable, and the Regional Engineer gave him assistance from time to time in obtaining supplies and transport.

Electricity consumption is being curtailed on a regular basis, following decisions of the local Rationing Committees. Allocation of current by A.A.I. to Region VII is likely to be adequate until September. (Full statistics and data

6442

Declassified E.O. 12356 Section 3.3/NND No. 785019

furnished). Canals serving four hydro-electric stations were damaged by floods. One of these is a total wreck, two others are still operating but urgently need repairs; whilst the fourth can be repaired fairly easily. Cement has been requisitioned. Requests for cement for repairs to the thermal-generating station at Reggio Calabria were refused because this plant consumes imported fuel, and has not only a very limited supply on hand.

One cement plant is operating in the Region in Cosenza Province. It can operate on Sardinian coal at the rate of about 260 tons per month, but requires 30,000 sacks (jute, paper or cotton) per month to package the output.

Treasurys are generally in operation throughout the Region. Two projects were approved for sewer repairs. The one gas-plant in the Region was undamaged, but cannot operate through lack of coal. The transport situation has become most serious. The Genio Civile originally had 10 vehicles loaned from the Italian Army. Three of them were taken back in June and Regional trucks were (as already noted above) cut down from 27 to 7. Supervising engineers of the Genio Civile have asked the Regional Engineer to get them passes to ride on freight trains when going out on inspections, since their road transport is so seriously depleted.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

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16. A.F.H.Q. FIFTH ARMY.

Capt. Gaither, Public Works Officer with A.F.H.Q. Fifth Army, reported at the end of June that two Engineer Lieutenants of the Italian Army had been assigned to assist him and had proved to be valuable in investigating conditions found in various advanced area communes concerning water, electricity, and so on. Due to rapid progress made by Fifth Army, emergency works had been possible only in the most urgent cases and on a very temporary basis. As to the public services mentioned, there had been a spirit of willing co-operation amongst Italian officials locally and if provided with an order from someone in authority, and given some materials, they had been found quite capable of "going ahead under their own steam". As to water supplies, lack of piping had been a principal difficulty, but no less than 240 tons of lead had been located by the F.A.C. in Orvietello. This had been promptly "frozen". Arrangements were made in June for the assignment of two Italian Army mine-disposal companies, and it was hoped that they would soon arrive in Anzio.

17. Rome Sector (Lt.Col. C.R. Fircheti).

A general statement about conditions in Rome has already been given in para. 2 (ii) above, i.e. as it was in the middle of June. Region IV Engineer Public Utility Unit had been stationed in Naples, ofs ating and planning in conjunction with Fifth Army A.F.H.Q. (Field). At the end of May the unit moved to Littoria for one week, and on 5 June to Rome. Meetings with Italian officials were held in the City Hall, the first only 15 hours after the Germans had left.

(i) Many pages of detailed information were furnished regarding the water supply position, beginning on 5 June when at 5 a.m. the reconnaissance party arrived in the City and went immediately to the offices of the Marcia Aqueduct, which is the principal supply to the City. The Chief Engineer of the Company was collected from his private house and taken to the office. Within an hour or two, the first watering point in a street was established, with a chlorination unit for sterilising. The Marcia Aqueduct still has 50% of its flow but there was practically no pressure. Large cypress has been damaged at five places at distances up to 21 kms. from Rome including serious damage at Tivoli and at a bridge carrying the aqueduct over the River Tiber. The other company supplying the City is known as the ACEA and this controls five smaller aqueducts, including the Paolo one which supplies the Vatican City.

(ii) Interconnections between the two companies' systems were arranged, to give mutual assistance, and at an early stage they were co-operating very well. By 12 June one aqueduct cypress had been repaired with all the others in hand. (Apart from damages to the aqueducts, the control line at the source had been wrecked. Details given of numerous other important damages elsewhere.) By June 30 the Marcia Aqueduct flow was been restored to 82% normal, with 90% of normal in the ACEA system. By the first week in July it was expected that quantities of water would be reasonably adequate and that pressure would be restored almost to normal, provided there were no more bursts in mains of aqueducts, this possibility being by no means excluded.

As to quality of water, analyses are being carefully watched and any change in the chlorine content is immediately taken up with the Italian Bureau of Hygiene.

[illegible] and taken place in Rome City proper [illegible] only had been

Declassified E.O. 12356 Section 3.3/NND No. 785019

17. Rome Sector (Lt.Col. C.R. Birchett).

A general statement about conditions in Rome has already been given in para. 5 (ii) above, i.e. as it was in the middle of June. Section IV Engineer Public Health Unit had been stationed in Naples, operating and planning in conjunction with Fifth Army A.M.G. (Field). At the end of May the unit moved to Littoria for one week, and on 5 June to Rome. Meetings with Italian officials were held in the City Hall, the first only 15 hours after the Germans had left.

(i) Many pages of detailed information are furnished regarding the water supply position, beginning on 5 June when at 5 a.m. the reconnaissance party arrived in the City and went immediately to the offices of the Lancia aqueduct, which is the principal supply to the City. The Chief Engineer of the Company was collected from his private house and taken to the offices. Within an hour or two, the first metering point in a street was established, with a chlorination unit for sterilisation. The Lancia aqueduct still had 50% of its flow out there was practically no pressure. Large syphons had been damaged at five places at distances up to 21 kms. from Rome including serious damage at Tivoli and at a bridge carrying the aqueduct over the River Aniene. The other company supplying the city is known as the ACEA and this controls five smaller aqueducts, including the Paola one which supplies the Vatican City.

(ii) Interconnections between the two companies' systems were arranged, to give mutual assistance, and at an early stage they were co-operating as well. By 12 June one aqueduct syphon had been repaired with all the others in hand. (Apart from damages to the aqueducts, the control line at the source had been wrecked. Details given of numerous other important damages elsewhere.) By June 30 the Lancia aqueduct flow had been restored to 62% normal, with 90% of normal in the ACEA system. By the first week in July it was expected that quantities of water would be reasonably adequate and that pressure would be restored almost to normal, provided there were no more bursts in mains or aqueducts, this possibility being by no means excluded.

As to quality of water, analyses are being carefully watched and any change in the chlorine content is immediately taken up with the Italian Bureau of Hygiene.

(iii) Such air raid and demolition damages as had taken place in Rome City proper by the end of June were being rapidly repaired. Two main thoroughfares only had been damaged, viz. Via Cestiense and Via Tiburtina. Italian control and executive agencies for public works in some cases had ceased to function in the later stages of the German occupation. A main duty was to get these to work again. The Tiber bridges are undamaged and in good condition with the possible exception of the old Roman narrow Ponte Milvio, and the Ponte della Ringhiera, so damaged by enemy action that it is unusable. An unfinished railway bridge was also damaged by the enemy, but traffic is being continued by means of a Bailey bridge. For street cleaning and refuse removal during the first week, military vehicles were temporarily lent, but by the end of the month these had been replaced by Governors vehicles. The public market on Via Cestiense was under repair as a general food storehouse for A.C.C., A.M.G. Fifth Army and Region IV purposes.

6447

(iv) A detailed report on the condition of the port at Fiumicino at the outlet of

Declassified E.O. 12356 Section 3.3/NND No. 785019

the Navigation Canal which connects with the Tiber river, situated about 11 miles below Rome, has furnished together with exact details of enemy damage inflicted and with suggestions for first aid repairs and as to salvage of numerous small boats sunk there, in view of the very considerable use to which the port could be put in giving supplies to Rome. In 1939 the port handled 60,000 tons of coal, 20,000 tons of oil, crude and refined, 20,000 tons of timber and 24,000 tons of cement (all imports). The Italians were using the port increasingly from 1936 onwards, imports in the former year being 11',000 tons in total whilst in 1939 they were over 200,000 tons.

(r) Concerning electricity, the general facts have already been noted in para. 3 of this report. The Regional Engineer's report for June covers many pages of detailed technical data which need not be repeated here, except to say that he considers a strict rationing programme is urgently needed and that it must be worked out on much more than a local basis since Rome depends for its supplies on hydro-electric sources considerable distances away. Every effort has been made to operate the two electric companies serving Rome as one power unit, a course which was never been taken before. The output of both the companies is in fact controlled by "Ufficio Controllo Energia Elettrica". A recent point in the policy of the Regional Engineer is that the two companies should take full responsibility for all operational details. General Tate stated, at a meeting of the 11 June with G-4 Fifth Army that he considers it essential to furnish Rome with all the electric power possible, up to 100% of that furnished during the period of the German occupation.

L.A. [illegible],
Lt.Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

The two electric companies serving to be on one power unit, a course which has never been taken before. The output of both the companies is in fact controlled now by one "load dispatcher". A second point is the policy of the Regional Engineer is that the two companies shall take full responsibility for all operational details. General Type stated, at a meeting of the 11 June with G-4 Fifth Army that he considers it essential to furnish home with all the electric power possible, up to 100% of that furnished during the period of the German occupation.

L.A. JUDD,
Lt.Colonel, C.E.,
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

10 June 44

SUMMARY OF ACTIVITIES DURING MAY 1944.

1. Remarks.

The work of the Sub-Commission in May was not marked by any spectacular changes in the nature of its duties, or any additions thereto, but rather by a process of evolution, the object of which was an all-round improvement in efficiency, greater expedition, and the minimising of possible causes of misunderstanding in various directions.

Consistent with its duties to the Chief Commissioner, the Sub-Commission has, over a period now approaching six months, endeavoured to keep in close contact with the Director of Works, A.A.I., the Chief Engineers of Nos. 1, 2 and 3 Districts (Military) and with the Chief Engineer P.B.S.

No. 1 District is Sicily, whilst Nos. 2 and 3 Districts are respectively, and broadly, the eastern and western sides of the mainland peninsula. P.B.S. areas are two, the more important lying north of Naples, and the other (for some reason a detached area) lying along the coastal strip south of Salerno. With the changing military situation these authorities have found it necessary to make frequent changes as to priorities e.g. stretches of road, bridges re-construction, etc. and in regard to organisational methods as between them, this Sub-Commission, and the Italian Genio Civile (Public Works). At a meeting on the 16 May, for example, the Chief Engineer No. 3 District requested, inter alia, that we should make special efforts to obtain contractors for three specified lengths of road; from that day, responsibility for all permanent bridge construction and supervision would become ours; two special bridges indicated, in the first instance; he to be in no way responsible for surveys and measurements, either before contractors started work or on completion; another quarry was to be handed over; special requests concerning Bailey bridges and other temporary bridges, construction or removal; detailed suggestions about availability of equipment, transport; and two R.E. officers to act in a liaison capacity, with this Sub-Commission. This is merely an indication of one of a series of changes that took place in the month, concerning one of the Chief Engineer's Districts. It is a small cross-section of the larger whole.

The aim of the Sub-Commission is, in general, to assist the Armies in every possible way by relieving them as rapidly as possible of engineering tasks, handing over these to contract or direct labour agency of a civil character and supervising, controlling, and above all expediting them (through the over-all agency of the Italian Genio Civile.)

With this in view conferences are held with the Director General, (Sig. Tiranno) two or three times weekly, and two or three times a month with the Minister of Public Works himself (Sig. Tarchiani). Reference was made in Para. 1 of the April report to the fact that Sig. Tarchiani had taken over the "portfolio" mentioned, and it was hoped that he would be able to bring about a greater degree of "drive and initiative". A month's further experience, in collaboration with him, has confirmed that the hope is likely to be realised at no distant date. This was [illegible] between the 5 and 10 May when the Minister and the Director

Declassified E.O. 12356 Section 3.3/NND No. 785019

over a period now approaching six months, endeavoured to keep in close contact with the Director of Works, A.A.I., the Chief Engineers of Nos. 1, 2 and 3 Districts (Military) and with the Chief Engineer F.B.S.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

A further change calculated to give better results was that Lt. Col. Lapper, in addition to his specialised work in the field of electrical engineering, took over responsibility for the control of public utilities, e.g. waterworks, gas, and main drainage, in addition to electricity. This change was made possible by the arrival from the U.K., during the month, of a number of highly qualified engineer officers able to take a considerable degree of individual responsibility. It is intended to retain two or three of these specialist officers at the headquarters of the Sub-Commission, sending them out as occasion may require to investigate more complex problems, and to give assistance on them to Regional Engineers at their various stations. Three examples of the usefulness of this occurred towards the end of the month. The Army asked us to press on with the completion of contracts, abandoned in 1943 by the Italians, regarding water-towers, and pumping plant at Capua. Increased supplies of water by the Army being urgently needed. A question arose about large quantities of bricks and other material being required at Benevento for main-drainage reconstruction. Long lists of projects contemplated were submitted by Salerno Province (Region III) which required a specialised investigation. Two of the senior officers recently arrived from the U.K. were assigned to these tasks with the result that the Capua scheme is again making progress, materials actually required at Benevento are found to be considerably less than the original demand, and t he numerous schemes in Salerno Province, including reconstruction work at a hospital (estimated to cost 3,200,000 lire) have been cut down to a strict series of priorities, some eliminated completely, and others have been reduced to what is commonly known as mere "first aid repairs". One of the officers also made specific recommendations regarding an electric power station at Capua, and there were others regarding main-drainage proposals for the town of Battipaglia which brought about substantial reduction in a demand for controlled structural materials.

Regions.

The April report of the Sub-Commission gave a summary of work done in the various Regions. This, and succeeding monthly reports, will continue the practice. Closer contact is now being maintained with Regional Engineers on technical and routine matters, directly, and on major matters or those of policy through Regional Commissioners. Up to a recent period it is probably true to say that the Regional Engineers and their staffs have been to a large extent autonomous and independent units. An outstanding example of this was Sicily where, even during the many weeks towards the end of 1943 when A.C.C. Headquarters were at Palermo, there was little or no recognition of the fact that questions of a technical nature, finance, or public works policy should be under a centralised control. It might not be an exaggeration to say that such conditions in the Island were chaotic. Even had they been as bad as that there could be little blame attached, having regard to the widespread destruction that accompanied the invasion of the Island, the demoralization and almost extinction of the Italian Public Works Organisation, and the fact that the Engineer Staff of A.M.G.O. for the whole Island did not exceed about four officers. Very considerable pressure was brought to bear on them by the Army, Civil Affairs officers, and Italian local authorities, to put in hand schemes of all kinds, many of which could very well have been left over for months, or even until a considerable period after the end of the war. The Deputy-Director of the Sub-Commission paid a special visit to Sicily at the end of March and the Director, accompanied by the Minister, paid a visit in the early part of May. Both these [illegible] in general to correcting some of the matters that were clearly [illegible] but the

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Declassified E.O. 12356 Section 3.3/NND No. 785019

ibility for a very large mileage of military highways, including bridges reconstruction, a specialized organisation had to be set up. This still continues, with a substantial number of engineer officers at various points between Catania and Cutenzaro in the south, to Foggia and Caserta in the north. Similarly, the urgency of the electric power situation (as to this refer to pages 6 and 7, para. 6 of the April report) made it necessary, between February and April, to send out a number of electrical specialists responsible not to the Regional Engineers, but directly to this Headquarters. With increasing commitments in Rome, and possibly far to the north of that City, it is felt that the time has now come when these two specialised and seperate branches of work should cease to be controlled directly by the Sub-Commission, and that there will be a balance of advantage in putting military highways, bridges, and also electric power matters directly under the respective Regional Engineers. Responsibility will be more clearly defined, Regional Engineers can operate their respective staffs as an integrated team; correspondence will be reduced in volume; the organisation in general will be made simpler; and at the same time it is hoped more efficient. Further, engineering personnel will be able to take full advantage of the Regional organisation as it exists, in matters such as transport facilities, obtaining supplies and structural materials, and in the regular receipt of general directives, orders, and other documents issued by the various branches of A.C.C. Headquarters. The change-over should be a smooth one, since the officers assigned to these various duties will be transferred to the Regions and the functions of these various officers will remain substantially the same. It is hoped to inaugurate the new system as speedily as possible after the conference on the 12 June. An indication of the categories, and numbers, of these Regional Engineering staffs will be seen by reference to the next paragraph of this report:-

(Para. 2 (a) gives a list of officers at this Headquarters (Naples), and on detached duty.
Para. 2 (b) gives a list of Regional Personnel.)

The numbers are 26 and 33 respectively, giving a total of 59 as on 31 May. The lists may not remain as they now are for more than a few days since further officers are expected from the U.S.A. in June, and there will certainly be demands, even more insistent than recently, for the assignment of officers for duty northwards, to Rome and beyond.

Amongst the large number of names appearing in promotion lists, both American and British issued during May, the names of only four officers of this Sub-Commission appeared. Major Knight's name also appeared in the British list, though this only confirmed the rank of Major which he had been holding for some months.

2. Nominal Rolls of Officers.

(a) At Headquarters, and on temporary duty elsewhere:-

Lieut-Col. L.A. Penny, C.B.E.,	(A)	Director, Sub-Commission.
Lieut-Col. G.E. Rhodes, R.E.,	(B)	Deputy Dir., Sub-Commission.

Public Works Division.

Declassified E.O. 12356 Section 3.3/NND No. 759019

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Lieut-Col. D.A. Jerry, C.E.,	(A)	Director, Sub-Commission.
Lieut-Col. G.E. Rhodes, R.E.,	(B)	Deputy Dir., Sub-Commission.

Public Works Division.

Lieut-Col. T.S. Thompson, R.C.E.	(B)	Chief, Public Works Division.
1st. Lieut. H.W. Shepherd,	(A)	Asst. to Chief, P.W. Div.
Major C. Boucher,	(B)	Headquarters.
Major R.W. Hyland.	(A)	T/D Salerno.
Capt. T.R. Brownlee.	(A)	T/D Catanzaro.
Capt. R.N.J. Hibbard.	(B)	T/D Salerno.
Capt. R.F. Weeber.	(A)	T/D Salerno.
Major A.G. Perley.	(B)	T/D Lucera.
Capt. J.L. Lambie,	(B)	T/D Lucera.
Capt. R.K. Walker,	(B)	T/D Lucera.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

Public Works Division (cont'd)

Capt. E.E. Feldman	(A)	T/D Caserta.
Capt. W.H. Gentry,	(A)	T/D Castellammare.
Capt. A.G.A. Saul,	(B)	T/D Caserta.
Major W.H. Gamble,	(B)	T/D Catania.

Utilities and Admin. Division.

Lieut-Col. W.A. Lapper,	(B)	Chief, Utilities & Admin. Division.
Capt. L.W. Loughlin,	(A)	Asst. to Chief, Util. & Admin. Div.
Major H.A. Westwood,	(B)	Headquarters.
Capt. E.H. Rogers,	(A)	Headquarters.
Capt. A.E. Freedy,	(B)	Headquarters.
Lieut. C.W. Atkins,	(B)	Headquarters.
Major E.J. Berry,	(A)	HQ., att. P.E.S.
Major V.S. Renton.	(A)	HQ., att. Palermo.
Capt. H.J. Rosam,	(A)	T/D Region IV.
Capt. P.A. Ryan.	(A)	T/D Region III.

(B) On present information and subject to correction the following Public Works Officers are permanently assigned to Regions as shown:-

Region I.	Lieut-Col.C.F. Bolick	(A)	Regional Engineer Officer.
	Major D.A. Boyd	(B)	Public Works Officer.
	1st.Lt. L.J. Hodges	(A)	Public Works Officer (Messina)
	Major A. Crowther	(B)	Elec. Util. Officer.
Region II.	Major W. Knight	(B)	Regional Engineer Officer
	Lieut.J.W.L. Butcher	(B)	Elec. Util. Officer.
Region III.	Lieut-Col. L.J.Hensley	(A)	Regional Engineer Officer.
	Major L.R. Denning	(B)	Public Works Officer.
	2nd. Lt.P.A. Strella	(A)	Elec. Util. Officer.
Region IV.	Colonel E.J. Edwards	(B)	Regional Engineer Officer.
	Lieut-Col. C. de C.E. Findley	(B)	Public Works Officer.
	Major A.G. Evans	(B)	Public Works Officer.
	Capt. T.P. Spriggs	(A)	Public Works Officer.
	Capt. J.S.C. Wilson-Heathcote	(B)	Public Works Officer.

Rome Sub-Region,
(att. 5th Army AAG)

Lieut-Col. C.R. Bitchett	(A)	Engineer Officer.
Major A.E. Michel	(A)	Public Works Officer.
Major C.P. Buckley	(B)	Public Works Officer.
Major J.C. Bayly	(A)	Public Works Officer.

Capt. A.B. Fraser.	(A)	Headquarters.
Lieut. C.W. Atkins.		
Major E.J. Berry.	(A)	Hq., att. F.B.S.
Major V.S. Benton.	(A)	Hq., att. Palermo.
Capt. H.J. Roast.	(A)	T/D Region IV.
Capt. R.A. Ryan.	(A)	T/D Region III.

(B) On present information and subject to correction the following Public Works Officers are permanently assigned to Regions as shown:-

Region I.	Lieut-Col.C.P. Bolick	(A)	Regional Engineer Officer.
	Major D.A. Boyd	(B)	Public Works Officer.
	1st.Lt. L.J. Hodges	(A)	Public Works Officer (Messina)
	Major A. Crowther	(B)	Elec. Util. Officer.
Region II.	Major W. Knight	(B)	Regional Engineer Officer
	Lieut.J.W.L. Butcher	(B)	Elec. Util. Officer.
Region III.	Lieut-Col. L.J.Moseley	(A)	Regional Engineer Officer.
	Major L.R. Deming	(B)	Public Works Officer.
	2nd. Lt.P.A. Serolla	(A)	Elec. Util. Officer.
Region IV.	Colonel E.J. Edwards	(B)	Regional Engineer Officer.
	Lieut-Col. G. de G.E. Findlay	(B)	Public Works Officer.
	Major A.G. Evans	(B)	Public Works Officer.
	Capt. T.F. Springes	(A)	Public Works Officer.
	Capt. I.C.C. Wilson-Heathcote	(B)	Public Works Officer.

Rome Sub-Region.
(att. 5th Army AMG)

Lieut-Col. C.R. Birchett	(A)	Engineer Officer.
Major A.E. Michel	(A)	Public Works Officer.
Major G.P. Buckley	(B)	Public Works Officer.
Major J.C. Rively	(A)	Public Works Officer.
Capt. B.M. Gaither	(A)	Public Works Officer.
Capt. P.P.C. Stephens	(B)	Elec. Util. Officer.
Lieut. E.P. Wade-Brown	(B)	Elec. Util. Officer.
Region V. Major C.A. Latimer	(A)	Regional Engineer Officer.
Major J.E. Foden	(B)	Public Works Officer.
1st. Lieut. J.H. Walsh	(A)	Public Works Officer.
Major J.S. Bennett	(B)	Elec. Util. Officer.
Region VI. Major W.M. Spann	(A)	Regional Engineer Officer.
Capt. E.E. Smith	(A)	Public Works Officer.

6419

4

Declassified E.O. 12356 Section 3.3/NND No. 785019

Region VII.	Major W.F. Chamberlin	(A)	Regional Engineer Officer.
Region VIII.	Major P.S.L. Lee.	(B)	Regional Engineer Officer.
	Capt. F.D. Kelv.	(A)	Elec. Util. Officer.
5th Army AMG.	2nd. Lt. A.J. Desidero	(A)	Moves with 5th Army Engrs. Frosinone-Rieti (N.E. of Rome)(Western portion)
			Not an Engineer, but doing liaison work on Highway Reconstruction, between 5th Army Engrs and Italian Genio Civile.
13th Corps.	2nd. Lt. M. Cuccia,	(A)	Moves with 5th Army in Eastern portion.
			Not an Engineer but doing liaison work on Highway Reconstruction, between 5th Army Engineers and Italian Genio Civile.

Remarks.

(a) Capt. T.R. Knowles (A) has now been assigned to HQ., F.W.A.C. Sub-Commission and is placed on temporary duty with Region VII.

(b) Major W.H. Gemble (E) has similarly been reassigned and is now placed on temporary duty with Region I.

(c) Major W.F. Chamberlin (A) assigned to Region VII as Regional Engineer Officer.

(d) Lieut-Col. J.C. Groth (A) assigned to Region IV, Rome Sub-Region, (attd 5th. Army A.F.H.Q.) as Electrical Utilities Officer.

(e) Major W. Knight (E) assigned to Region II as Regional Engineer Officer.

(f) Lieut-Col. J.F. Labcon (A) having left this Sub-Commission is assigned C.M.F.O., Region V, on 21 May 44.

(g) Major J.C. Rively (A) assigned to Region IV, Rome Sub-Region as Public Works Officer 19 May 44.

(h) Capt. F.D. Kelv (A) assigned to this Sub-Commission and is awaiting transfer to Region VIII as Electrical Utilities Officer.

(i) Major P.S.L. Lee (E) reported to these HQ's and awaits assignment to Region VIII as Regional Engineer Officer.

(j) The following British Officers having arrived from the U.K. are assigned as shown:-

Major A.G. Evans to Region IV as Public Works Officer.
Capt. F.R.C. Stephens to Region IV, Rome Sub-Region, as Elec. Util. Offr.
Major G. Boucher to HQ. this Sub-Commission in Public Works Division.
Major H.V. Westwood to HQ. this Sub-Commission in Util. and Admin. Div.
Capt. A.M.J. Hibbard to HQ. this Sub-Commission in Public Works Division.
Lieut. C.W. Atkins to HQ. this Sub-Commission in Util. and Admin. Div.
Lieut. E.F. Wade-Brown reported this HQ. and has been assigned to Region IV, Rome Sub-Region.

Declassified E.O. 12356 Section 3.3/NND No. 785019

15th Corps.	2nd. Lt. M. Cuccia,	(A) Serves with 5th Army in Eastern portion. Not an Engineer but doing Engineer work on Highway Reconstruction, between 5th Army Engineers and Italian Comic Civile.

Remarks.

(a) Capt. T.F. Brownlee (A) has now been assigned to HQ., P.W.A.U. Sub-Commission and is placed on temporary duty with Region VII.
(b) Major W.H. Gamble (B) has similarly been reassigned and is now placed on temporary duty with Region I.
(c) Major W.F. Chamberlin (A) assigned to Region VII as Regional Engineer Officer.
(d) Lieut-Col. J.C. Breth (A) assigned to Region IV, Rome Sub-Region, (att. 5th. Army A.M.G.) as Electrical Utilities Officer.
(e) Major W. Knight (B) assigned to Region II as Regional Engineer Officer.
(f) Lieut-Col. J.F. Labcon (A) having left this Sub-Commission is assigned C.A.O., Region V, on 11 May 44.
(g) Major J.C. Nively (A) assigned to Region IV, Rome Sub-Region as Public Works Officer 13 May 44.
(h) Capt. F.D. Kelly (A) assigned to this Sub-Commission and is awaiting transfer to Region VIII as Electrical Utilities Officer.
(i) Major F.S.L. Lee (B) reported to these HQ's and awaits assignment to Region VIII as Regional Engineer Officer.
(j) The following British Officers having arrived from the U.K. are assigned as shown:-

Major A.G. Evans to Region IV as Public Works Officer.
Capt. F.M.C. Stephens to Region IV, Rome Sub-Region, as Elec. Util. Offr.
Major G. Boucher to HQ. this Sub-Commission in Public Works Division.
Major H.A. Westwood to HQ. this Sub-Commission in Util. and Admin. Div.
Capt. F.N.J. Hibberd to HQ. this Sub-Commission in Public Works Division.
Lieut. C.W. Atkins to HQ. this Sub-Commission in Util. and Admin. Div.
Lieut. R.F. Wade-Brown reported this HQ. and has been assigned to Region IV, Rome Sub-Region.

6442

5.

Declassified E.O. 12356 Section 3.3/NND No. 785019

3. Rome

Attention was given to the strengthening of engineer personnel attached to Region 3, Region 4 and A.M.G. 5th Army, coupled with the City Administration Section (Rome). In all, a total of 59 officers are now so assigned, including 11 in May. Special lists were obtained from the Minister of Public Works of reliable Italian engineers who may, or who may not, be now in the Capital with a view to their immediate employment in the rehabilitation of the City's public services and structures should these be damaged; or their possible employment elsewhere. The Director of the Interior Sub-Commission was notified and the list, (with certain priorities for employment) is being forwarded to Col. Hedding to whom it was arranged that all such information should go. In this connection, and in view of the extraordinary importance of the Rome situation, it is suggested that reference back should be made to this Sub-Commission's report for February where, in Para. 4 (c) there will be found a concise statement covering what was done at that time, together with a specific reference to Col. Holding.

Both in March and April additional information was furnished to that officer concerning Rome and its public services (and see also Para. 9 of the Sub-Commission's report for March.) It is hoped, in the conditions now obtaining, that the preliminary work undertaken some months ago may be proving of value.

4. Tours of Inspection. Between the 5 and 10 May, the Director, accompanied by the Minister visited Sicily (already noted above). Between 17 and 21 May he also visited Campobasso, Foggia, Bari and Potenza, accompanied by Lt. Col. Thompson, more particularly concerning problems connected with military highways and bridges.

There was a special conference with the Chief Engineer No.2 District at Bari, (Brig. Edwards). Results of the Sicily visit were important, and have already been referred to (para.1 above). In addition, certain highways priorities were re-arranged and others struck out.

The results of the second inspection tour were less satisfactory, progress on parts of the military highways program being slower in some areas than had been originally hoped. Remedial measures were initiated, one of these being, for example, a strong personal protest to the Minister and to the Director-General (a day or two later) about apathy and lack of initiative, coupled with "failure to get out and see things for themselves", on the part of certain Italian engineer officers. Other steps were also taken. It cannot be too strongly emphasized however that in this, as in all other branches of engineering activity, the Sub-Commission cannot achieve a higher standard of performance, in other words "getting results", than that set by the Italian Public Works Organization, itself. Performance does, unfortunately, often fall far short of promise. This matter has been twice previously referred to, viz. in Para.1 of both the March and April reports (which may be perused). When representations are made all kinds of excuses and explanations are offered, ranging from the fact that neither the Public Works Department nor its contractors has equipment, transport or materials; it is alleged that the superior engineering staff receives such a low scale of salary that it can hardly be expected to do more than the absolute minimum; or, it is stressed that travelling involves extra expense for food and lodging, and present allowances cover only a fractional part of it.

5. Highways and Bridges (Military Priority Lists) and Public Works. All these are now under the control of Lt. Col. Thompson following the transfer of Lt. Col. Latoun (referred to in Para.1 above). Additional officers were allotted during May and these were posted, in the first instance, to places where they can most quickly get experience.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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5. Highways and Bridges (Military Priority Lists) and Public Works. All these are now under the control of Lt. Col. Thompson following the transfer of Lt. Col. Laboon (referred to in Para.1 above). Additional officers were allotted during May and these were posted, in the first instance, to places where they can most quickly get experience.

At the beginning of the month eight bridges on main highways were under construction, and at the end of the month this number had risen to fifteen.

Progress should be fairly rapid as materials required are now allocated. Ten new bridges were under survey and design at the end of the month, or were being let out to contract. A significant move was (already noted previously in Para. 1 above) that the Chief of Engineer No. 3 District decided to transfer practically all responsibility for bridges to the Sub-Commission.

6477

At the end of May heavy repairs of a major character were in hand on 198 miles of

Declassified E.O. 12356 Section 3.3/NND No. 785019

roads, mostly under contract, whilst normal repairs on 771 miles were similarly in hand, either by contract or under strengthened gangs of the "Cantonieri" (direct labour). In spite of abnormally heavy traffic throughout the northern military government territory, there was a marked improvement in road conditions during May, both as to foundations and surfacing. All roads coming under first priority (military) were in hand, except for certain delays occasioned by local shortages of bitumen, or transport. The materials supply position improved somewhat, brick and cement roads being fairly adequately met. A principal difficulty remains the shortage of bitumen. As to transport, reference is here made to the first part of Para. 4 of the Sub-Commission's April report, where it was mentioned that 200 trucks would be put at our disposal by A.A.I. This has been a disappointment since the vehicles actually released proved to be of the Class 3 type, and a large proportion of them were not capable even of moving under their own power. This kind of thing remains a severe handicap, and it is to be repeated once again that the problem will not be solved (i) until the Italians themselves take more energetic action in requisitioning vehicles, at any rate in their own territory and (ii) until the large consignment of engineering plant and transport vehicles arrives from the U.S.A.

Similarly, transport for our own officer personnel remains inadequate, six officers being without vehicles, though their duties should carry them over hundreds of miles of inspection work almost every week. (Through sending one of our officers specially to assist, the Genio Civile did in fact get 20 civilian vehicles in May by requisitioning. This seldom or never happens in the absence of such assistance; though it should be wholly unnecessary). The total number of quarries operated rose during May from five to eight, in the effort to make contractors independent of army supplies for road-making material.

In certain forward areas the "Cantonieri" houses and depots along the roads are still occupied by military personnel, and so are not available for their normal use. In other cases the buildings have been destroyed. Apart from this, however, definite progress was made towards getting the Cantonieri gangs of men back to work.

In and around Naples, five buildings were under repair or reconditioning. All are expected to be completed during June, though there were delays due to lack of certain materials. Reports were furnished concerning structures such as the Orlotto Bldg., Salt Warehouses, a refugee camp, conditions at 61 Via Medina and others; and special inspections were made and reports submitted regarding the request of Region III for an additional 3600 sq.ft. of warehouse accommodation. (This low figure was queried by the Sub-Commission, and it was later found that the figure should have been 15,000 sq.ft.) In view of the acute shortage of roofing materials of all types, the construction of new buildings is for the time being almost out of the question; the suggestion was therefore made that one of the long and wide road tunnels under the hill near the docks should be used for storage purposes. The matter has a bearing on policy and on traffic problems, and a decision is awaited.

At the end of May, 107 contracts for roads, bridges and buildings were in hand, this number including 35 new ones let during the month. These 35 amounted in the aggregate to over 94,000,000 lire, and the total value of contracts let, as up to the end of May, amounted to almost exactly 250,000,000 lire.

6. Electrical Division. This reports under the control of Lt. Col. Legg who has also taken over responsibility for most of the work formerly done by the Electrical Power Mission (under Col. Crowdon). In addition that officer has, as already noted, taken over responsibility for public utilities such as gas, water and main drainage [illegible]

Declassified E.O. 12356 Section 3.3/NND No. 785019

the problem will not be solved (i) until the Italians themselves take more energetic action in requisitioning vehicles, at any rate in their own territory and (ii) until the large consignment of engineering plant and transport vehicles arrives from the U.K.

Similarly, transport for our own officer personnel remains inadequate, 18 officers being without vehicles, though their duties should carry them over hundreds of miles of inspection work almost every week. (Through sending one of our officers specially to assist, the Genio Civile did in fact get 20 civilian vehicles in May by requisitioning. This seldom or never happens in the absence of such assistance; though it should be wholly unnecessary). The total number of quarries operated rose during May from five to eight, in the effort to make contractors independent of army supplies for road-making material.

In certain forward areas the "Cantonieri" houses and depots along the roads are still occupied by military personnel, and so are not available for their normal use. In other cases the buildings have been destroyed. Apart from this, however, definite progress was made towards getting the Cantonieri gangs of men back to work.

In and around Naples, five buildings were under repair or reconditioning. All are expected to be completed during June, though there were delays due to lack of certain materials. Reports were furnished concerning structures such as the Orlando Bldg., Sale Warehouses, a refugee camp, conditions at El Via Medina and others; and special inspections were made and reports submitted regarding the requests of Region III for an additional 3600 sq.ft. of warehouse accommodation. (This low figure was queried by the Sub-Commission, and it was later found that the figure should have been 15,000 sq.ft.) In view of the acute shortage of roofing materials of all types, the construction of new buildings is for the time being almost out of the question; the suggestion was therefore made that one of the long and wide road tunnels under the hill near the docks should be used for storage purposes. The matter has a bearing on policy and on traffic problems, and a decision is awaited.

At the end of May, 107 contracts for roads, bridges and buildings were in hand, this number including 35 new ones let during the month. These 35 amounted in the aggregate to to over 54,000,000 lire, and the total value of contracts let, up to the end of May, amounted to almost exactly 250,000,000 lire.

6. Electrical Division. This remains under the control of Lt. Col. Lupper who has also taken over responsibility for most of the work formerly done by the Electrical Power Mission (under Col. Crowder). In addition that officer has, as already noted, taken over responsibility for public utilities such as gas, water and main drainage (Public Utilities). One officer with special electrical engineering qualifications was assigned to Region VIII and three to Rome City Sub-Region. One of the senior officers from the U.K. with specialised hydraulic experience was assigned to waterworks and main drainage projects, repairs or re-construction, whilst another was allocated for work in connection with the supply and requisitioning of materials. Under the heading of control of electric power supplies, further meetings were held with officials of the Public Works Ministry regarding a more uniform application of the Decree on electricity rationing. (Urgent need for this, and the complexities concerning it, were set out fully in Para. 6 of the April report of this Sub-Commission. That paragraph should be perused, in order fully to appreciate the present position). The rationing has given very marked and on the whole satisfactory results, with a corresponding saving in coal consumption at thermal power stations, and (even more important) conservation of the water held in storage at various high-level lakes and impounding reservoirs that furnish power to the numerous hydro-electric stations.

Declassified E.O. 12356 Section 3.3/NND No. 759019

Declassified E.O. 12356 Section 3.3/NND No. 785019

difficult operation, some parts of the plant being of great weight, apart from numerous electrical, hydraulic, and structural complications. Some time ago the C.E. Comd. asked this Sub-Commission to undertake responsibility for the dismantling and transhipment.

Lt. Col. Lapper paid a visit to Sicily lasting several days in connection with the matter, and two officers have been fully occupied on it there for several weeks. They will return to Headquarters when the shipment moves to Naples.

Miscellaneous other matters dealt with at meetings of the Local Resources Board and the Central Electrical Board were the following:-

(a) Movements of other electric power-using authorities were held regularly in Nos. 2 and 3 Districts (Military) and there were also meetings particularly affecting 75, 9th and P.O.W. areas.

(b) In the Naples-Torre Annunziata areas, in order to release power to industries essential to the war effort, about 6,000 KW of load to be disconnected.

(c) In No.52 area, the three sub-areas should complete power-loading lists on which action can be taken for the disconnecting of selected transformer stations when the full extent of the emergency in Rome (or north thereof) becomes known.

(d) In addition, complete lists of feeder circuits have been prepared so that these can be disconnected in the event of a more grave emergency arising.

(e) Officers of the Sub-Commission have collaborated, and to a large extent controlled this power conservation so far as it has gone up to the present; and with the provision that still more drastic steps can be taken at any moment, if required.

(f) Both the Local Resources Board (Italian) and the Chief Engineer No. 3 District have expressed their particular satisfaction with the way the A.M.G.O. representatives have acted, and they consider the results to be good. Apart from the shipment of the large hydro-electric plant from Sicily and its re-installation at Matera the most important other active electrical project in the moment is the transmission line to Foggia, starting at a point near Ariano, north of the River Ofanto. (This was referred to on Page 7 of the April report, and also Para. 2 of the March report). A large materials-dump was established at a point between Naples and Mignano, and with the advance of the Armies the actual rebuilding of the line was begun during the last week in May. It will be pushed through with all possible speed, an American Engineer unit being reinforced by over 300 civilian workmen. Large numbers of land mines are being found along the route, and within the first few days several casualties occurred. The Sub-Commission has had an officer on this work for some time, and may have to take over complete control at any moment. Large stocks of materials had to be requisitioned, arrangements for housing, payment and feeding of the workmen, and other things have had to be planned and prepared by this Sub-Commission.

Declassified E.O. 12356 Section 3.3/NND No. 785019

(h) The following rate adjustments were allowed to various Public Utility Companies:

	Electricity Companies.	Date	Temporary Surcharge	Remarks
No. 1	Societa Meridionale di Elettricita	16 May	80%	Wholesale rates to subsidiaries reduced to previous level.
No. 2	Societa Generale Pugliese di Elettricita	16 May	15%	
No. 3	Societa Elettrica della Campania	15 May	80%	
No. 4	Societa Lucana per Imprese Idroelettriche	16 May	20%	
No. 5	Societa Elettrica della Calabria.	16 May	10%	
No. 6	Gerardo and Fecce Pallante, Campobasso	25 May	100%	
No. 7	Azienda Elet. Ortognano	16 May	60%	
No. 8	Societa del Gilento	28 May	100%	Through Italian Govt.
	Water Companies.			
No. 1	Torre Annunziata	23 May	300%	
No. 2	Vesuviana	17 May	150%	
No. 3	Pozzuoli	17 May	200%	
No. 4	Naples	30 May	200%	(150% only on bulk supplies)
	Gas Companies.			
No. 1	Naples	29 May	500%	

Declassified E.O. 12356 Section 3.3/NND No. 785019

	Elettricita	16 May	80%	Wholesale rates to subsidiaries reduced to previous level.
No. 2	Societa Generale Pugliese di Elettricita	16 May	15%	
No. 3	Societa Elettrica della Campania	15 May	30%	
No. 4	Societa Lucana per Imprese Idroelettriche	16 May	20%	
No. 5	Societa Elettrica della Calabria.	16 May	10%	
No. 6	Gerardo and Rocco Fellante, Campobasso	25 May	100%	
No. 7	Azienda Elet. Orognano	16 May	60%	
No. 8	Societa del Cilento	28 May	100%	Through Italian Govt.

Water Companies.

No. 1	Torre Annunziata	23 May	300%	
No. 2	Vesuviana	17 May	150%	
No. 3	Pozzuoli	17 May	200%	
No. 4	Naples	30 May	200%	(150% only on bulk supplies)

Gas Companies.

No. 1	Naples	29 May	500%	

NOTE: These surcharges are subject to review on the next quarterly statements, covering actual running expenses only; the surcharges allowed make no provision for remuneration of capital, sinking funds, allowances for plant and machinery depreciation etc.

6138

Declassified E.O. 12356 Section 3.3/NND No. 785019

7. Regional Reports.

Region 1. (Sicily)

Dry weather has enabled more rapid progress to be made on roads, bridges and buildings. Efforts were concentrated on the two former, particularly required by the Chief Engineer No. 1 District (Military). The complete list consisted of about 200 separate works, of which 70 were bridges. Total estimated expenditure 250,000,000 lire. Arrangements were finally concluded last January; by the end of May many works had been completed, and out of the whole 200 only four remained to be started. About 90% of the schemes were on State roads. Captain (now Major) W.H. Gamble arrived at Palermo on 13 May and proceeded to Catania a day or two afterwards for this work, having been specially sent there to assist, from this Headquarters.

Numerous other works are in hand through Italian agency, such as demolition of dangerous buildings in the bombed cities, removing debris, repairs to acqueducts, main drainage systems, public buildings, harbours, some work on lighthouses, and others for the accommodation of refugees. There was trouble during the month about the Genio Civile starting a number of projects without approval, on the basis that if they cost less than 200,000 lire each they could be so started. The number of these reached undue proportions, however, and remedial steps were taken. This, coupled with other measures, should have a stabilizing effect on public works expenditure in the Island, and should also assist in getting constructional material used to the best advantage.

(i) Messina. Work on this severely wrecked city has proceeded more slowly than usual owing to a disinclination on the part of labourers to work more than the normal hours even in the summer. Special transport had to be sent out to villages in order to get more men, taking them back to the villages again every evening. The Regional Engineer on the 16 May visited ten schemes in hand, and they were all under-staffed as to workmen.

Considerable pressure was applied in May to have a roof put on the Messina Cathedral, and to get an estimate of 8,000,000 lire approved. The Prefect of the Province argued that to start work on this building would have a "great psychological effect" on the people. A second alleged reason was that if the building were re-roofed, the Archbishop could celebrate his 50th year of office, in the Cathedral next September. The Italian authorities have since

Declassified E.O. 12356 Section 3.3/NND No. 785019

Headquarters.

Numerous other works are in hand through Italian agency, such as demolition of dangerous buildings in the bombed cities, removing debris, repairs to aqueducts, main drainage systems, public buildings, harbours, some work on lighthouses, and others for the accommodation of refugees. There was trouble during the month about the Genio Civile starting a number of projects without approval, on the basis that if they cost less than 200,000 lire each they could be so started. The number of these reached undue proportions, however, and remedial steps were taken. This, coupled with other measures, should have a stabilizing effect on public works expenditure in the Island, and should also assist in getting constructional material used to the best advantage.

(i) Messina. Work on this severely wrecked city has proceeded more slowly than usual owing to a disinclination on the part of labourers to work more than the normal hours even in the summer. Special transport had to be sent out to villages in order to get more men, taking them back to the villages again every evening. The Regional Engineer on the 16 May visited ten schemes in hand, and they were all under-staffed as to workmen.

Considerable pressure was applied in May to have a roof put on the Messina Cathedral, and to get an estimate of 8,000,000 lire approved. The Prefect of the Province argued that to start work on this building would have a "great psychological effect" on the people. A second alleged reason was that if the building were re-roofed, the Archbishop could celebrate his 50th year of office, in the Cathedral next September. The Italian authorities have since been reminded of three things: that the proposed roof would protect no part of the interior, nor any work of art, since these were all lost in the fire of June 1943; that hundreds of churches in England have to await reconstruction till after the war, including the beautiful old Cathedral of Coventry; and that the Archbishop of Coventry was enthroned amid the ruins of his Cathedral a year or two ago.

A letter has been sent from this Headquarters rejecting the proposal.

6137

Declassified E.O. 12356 Section 3.3/NND No. 785019

(ii) It is stated that Messina is "looking much better than it did a few months ago". There is still a great deal to do, but repairs and reconstruction are organized in such a way that notable progress should be evident by the end of August. (This has no reference to the very large number of completely destroyed buildings, the gas Works, and other similar things.)

(iii) Catania. This city was damaged to an infinitely smaller extent than Messina. It is the headquarters of No. 1 District (Military) and all requirements of the Chief Engineer are formulated there. Major Gamble is now on the spot to assist, instead of the former cumber-some procedure under which all military demands had to be sent to the Regional Engineers Office at Palermo. There is talk of the re-starting of a part of the cement works at Catania, in which the Provincial Commissioner is interested. Details were sent to him of a practicable method for the use of the inferior Sardinian coal, in cement manufacture. There is also a wish to operate a part of the gas works, but the probability of this seems remote under present conditions, viz. lack of replacement plant, and coal-supply difficulties.

(iv) Syracuse. Some public buildings are still under repair. A request from the Naval Officer in the neighbouring port of Augusta for demolition of certain dangerous buildings was examined, and an estimate of cost formulated.

Materials. Cement works near Palermo, capable of producing 3000 tons a month had to be closed down, since the nature of the retorts made it possible to use in them only anthracite coal. Sardinian coal proved to be valueless. With the provisional starting up of the gas works in Palermo, however, the Regional Engineer carried out experiments in order to reduce the volatile content of Sardinian coal from 40 to about 12%, thus rendering this coal suitable for cement production. The cement works can therefore be reopened.

Transport. This still remains a difficult problem since through rail transport on the Island does not exist and there is a shortage of lorries. Italian engineers of the supervising staff cannot get out to see that works are progressing because their private cars are (with continued use and no spare parts) becoming more and more unreliable.

Electricity. There are 14 power-plants in the Island, 11 of these being hydro-electric and the other three operated by steam power. Of the three latter, Palermo and Catania had fair stocks of both

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Electricity. There are 14 power-plants in the Island, 11 of these being hydro-electric and the other three operated by steam power. Of the three latter, Palermo and Catania had fair stocks of both imported and Sardinia coal in hand at the end of May. The maximum possible amount of Sardinian coal is being utilized. Requirements of imported coal for June, July and August for the three thermal stations range between 7000 and 8000 tons a month. A 5,000 KW generator for Porto Empedocle is repaired and will be in operation by the end of June.

Improvised repairs were carried out at the Palermo plant, involving much electric welding. Twelve sections of a transmission line near Porto Empedocle were destroyed due to a recent ammunition dump explosion near Agrigento.

6436

11.

Declassified E.O. 12356 Section 3.3/NND No. 785019

A threatened strike amongst electrical workers in both eastern and western Sicily was averted, at least temporarily. The Societa Generale Elettrica della Sicilia, the owners of the hydro-electrical plant now under removal to Italy by this Sub-Commission, have collaborated completely in the project. The main unit under removal is capable of a 3500 KVA output. Transport from the site to the port of Palermo has been afforded by the Island Base Section (Ordnance Service), whose personnel has also most actively assisted.

A notable improvement in the amenities of Palermo was the starting-up of the gas works in the middle of May, after a very long period. The operational period is only 7 hours out of 24 and the use of the gas is limited strictly to cooking purposes. The distribution system (mains) was considerably damaged, but repairs are in hand to the extent that in the very near future practically all parts of the city will have at any rate a limited service.

8. Region II.

This Region was without a Public Works officer up to very recently. A short report from the officer who took charge temporarily (Lt. Butcher), covering the month of May, concerns mainly the electrical position with which he was particularly concerned. Major Knight has, within the last few days, been appointed as Regional Engineer and future reports will, it is hoped, be more comprehensive. The roads and bridges position in the Region has been covered by information already given. Additionally, the Regional Commissioner (Monthly Conference 30 May, at Naples) said:- "Much improvement in road and bridge repair, and in the organization of the Italians in this Region". Also, "Plans now being made for reduction in consumption of electric power when, and if, it becomes necessary". There is little detail on Public Utilities generally, nor about buildings, but a subsidiary aqueduct is being constructed in the Taranto area, necessary to supplement the water supply to the town and port. Headquarters No. 2 District (Military) are specially interested, and the work is to be completed in June.

9. Region III.

The electricity situation in Region III is not in a critical position at present, but this by no means indicates that there is sufficient for all purposes. During May 428 applications were received for continued service (under the rationing system), of which 127 were rejected and 97 were sent to various Sub-Commission

Declassified E.O. 12356 Section 3.3/NND No. 785019

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The Regional Engineer considers that rationing of current must be continued for various reasons, e.g. there will be further requests for power purposes from small flour mills and food plants in the next few months, which must be satisfied; there will be more requests for reconnection of supplies in the recently occupied territory north of Naples, whilst there will be no increase in generating capacity; reserves must be kept in hand for certain factories now operating, and which may attain a much larger production within the next three months; a limited tramway service in and around the city of Naples is under contemplation. Many small power users in the Salerno - Torre Annunziata - Castellammare area had to be disconnected, only those with a high priority being

6735

Declassified E.O. 12356 Section 3.3/NND No. 785019

reconnected on special application. This has enabled an ample quantity of electricity to be available for the operation of certain steel-mills, in production for the Armed Forces in Torre-Annunziata and Castellammare.

For the clearing of rubble and debris in Naples City, including ordinary street clearance, the number of trucks available has never exceeded 24. These were got from a pool of trucks numbering 200. In May 160 of these were sent to forward areas with the result that the 24 available for this vitally important work (bound up closely with both amenities and public health) had to be reduced to four. The Prefect was pressed to get an additional 15 trucks but these were mostly in bad repair, and cannot be in service for some time.

At the moment the work is seriously crippled. Repairing of the Riviera di Chiaia was started, divided up into three separate sections; extremely heavy traffic to and from the port has in the past made it almost impossible to keep this road in condition. A gap at the top of the Via Posillipo was filled in with rubble to allow traffic to get across, as a temporary expedient. Tramway service repairs, with a view to partial operation soon, is generally in hand, in some cases with bridge gaps also filled in with bricks and rubble, in lieu of either a temporary or permanent bridge.

Reference was made in last month's report to special work being done on the main-drainage system of Naples City (sewers). In March a vigorous cleansing campaign was started since many of the sewers were blocked, the water line was rising, and certain low-lying areas were being flooded. This would have caused a serious mosquito and malarial problem had it been allowed to continue. The cleansing was done by putting to work double shifts of men, and by the end of May it was practically finished. There is no danger of the areas being again flooded. Outside the city, in the Provinces, work on bridges and roads of a secondary character are being regularly done, but progress is slow since materials supplies are getting more and more critical.

The subsidiary water supply towards Pozzuoli, mentioned in the April report, was completed (as to main-laying) in 15 days. This was brought about by almost hour to hour close supervision by the Regional Engineer's staff. They also obtained cement, through the effort of this Sub-Commission which was used for rebuilding one of the high-level water reservoirs serving the City, a project that had been delayed for weeks owing to lack of this material.

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Declassified E.O. 12356 Section 3.3/NND No. 784519

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Production of gas at the main works is rapidly improving, wrecked buildings being restored and plants being repaired, even though in a semi-improvised manner. On the 15 May a supply of gas to considerably extended portions of the City was given. Both the public and members of the Services were given thorough warning in advance, in the press and in Orders, about the danger inherent in starting these new areas through the presence of explosive mixtures of air and gas, which might be carried into the houses. The publicity was effective, and in the whole of the 18 additional areas no accidents were reported. About 2 Kms. of pipe-line were obtained from P.B.S. by the Regional Engineer, and this has been used by

Declassified E.O. 12356 Section 3.3/NND No. 785019

the Company for the repair of places badly damaged by mines and bombing. The gasworks received a stock of 700 tons of Sardinian coal in May. It is of inferior grade but a small proportion can be used, if mixed with gas-coal. Approval of a temporary surcharge not exceeding 500% was given to the Gas Company, this being related very largely to the extremely high prices of imported coal (The Regional report contains information about transport and tele-communications; these matters rest with other Sub-Commissions and will no doubt be reported on by them).

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

6433

10. Region IV

The whole of Region IV remained during May under A...C. of Armies. From about the middle of April, Col. D.J.Edwards, R.E., (Regional Engineer) was with advanced Region IV Headquarters in order to be in close touch with Army Headquarters, and to undertake inspection trips of such portions of Region IV as were accessible. Under transport demands, 33 trucks were promised by the 1st June; 33 Italian drivers were understood also to be forthcoming; but there are complaints that no arrangements had been made for rations, discipline, and other administrative matters; and no Italian NCO's officers in charge. The Regional Engineer reports that a considerable amount of draftsman's work was completed in his drawing office on technical plans, maps and organisational charts. A shortage of office personnel was reported, one E/M only being available for the work and records concerning 14 officers; this figure included the separate engineering personnel for Rome Sub-Region, which moved during the month to a concentration area. Four engineer Officers allocated to the Region (by this Sub-Commission) reported for duty, viz. Lt.Col. Breth (A), Major Rively (A), Major Evans (E) and Lt. Wade-Brown (E).

The position being serious in Littoria Province (Pontine Marshes) two specialist Italian Engineers of the Genio Civile left Naples on 29 May to organise direct labour, contractors, or any other agency at their command. Latest reports indicated a slight lowering of the flood-water level, with one of the large land drainage pumps back in operation.

(Note: A request for these engineers, with previous experience of the Marshes was received by this Sub-Commission on 27 May. Arrangements were immediately made with the Director General, Genio Civile; the men were selected, arrived at Naples from another place on 29 May, and reported at this Sub-Commission's offices. Two hours later they left for Littoria, provided with transport, necessary documents, etc.).

In Littoria Province five water supply undertakings had been inspected by the end of the month; all were found to be damaged and out of action, viz. pumps and other mechanical plant, aqueducts and so on.

The engineering activities of Region IV were closely

Declassified E.O. 12356 Section 3.3/NND No. 785019

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The engineering activities of Region IV were closely coordinated with those of A.I.G. 5th Army, through Capt. Gaither.

11. Region V.

Major C.A. Latimer (A) is the Regional Engineer. His staff during May was mainly engaged on routine matters, and in furtherance of items of work mentioned in the last report. A survey of the water supply system of Terwoli was made, which showed that earlier difficulties had been overcome and the town has now a reasonable supply of water. The water position at Campobasso town is fairly satisfactory but requires constant attention. Military needs in certain parts of the supply area have caused shortages of water in other parts. Part of the distribution system is gravitational and the other part by pumping. The latter system is being extended.

6432

15

Declassified E.O. 12356 Section 3.3/NND No. 785019

A survey of roads of secondary importance was started in order to determine the possibility of constructing temporary bridges, or minor diversions, as a stop-gap arrangement. Many long detours are now necessary in certain parts of the Province, causing wastage of transport, time, and increased petrol-consumption. Arrangements were made with the Royal Army Ordnance Corps and with R.E.M.E. for spares and repairs of vehicles. Separate reports were made to the Transportation Sub-Commission on the possibility of re-opening the Campobasso-Termoli Railway. Electricity supply is satisfactory. Repairs to hydro-electric plant at Decorno were expected to be completed by 7 June, producing an additional 385 KVA. A further 150 KVA will be available by the end of June when replacements of certain electrical equipment at Rofreddo are installed. Additional power transmission lines are under repair. Power plant progress, generally, indicates that in due course the Biferno group of stations will be providing current in excess of local needs and when this is achieved power can be exported northwards along the UNRRA system, up the Adriatic coast. A building in Campobasso was practically completed, ready to be handed to the Economic and Supply Division, and a workshop was put in operation.

Power demand for a paper manufacturer, when the mill is re-opened, will be so substantial that it was decided to put the matter before the Naples Committee as a special case. Power supply to a much-needed waste plant near Campobasso was improved by the installation of a new transformer. Technical reports were furnished to Economics and Supply, to Agriculture, and to the Mines Division concerning grain storage facilities, a manganese mine, and other things.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Declassified E.O. 12356 Section 3.3/NND No. 785019

12. Region VI.

The April report of this Sub-Commission mentioned heavy war damage in the City of Cagliari, and that the clearance of this and the minimizing of its inherent dangers would be a principal task of the Public Works staff there. Little or nothing had been done by the Italians, and even as recently as the 26 February last, only 5% of the work had been done. The latest report, given in fortnightly periods, is up to the 20 May. It shows that in the three months from February to May the 5% figure had been raised to 22%. The city has been systematically divided into six areas, and the whole program put on a basis of priorities, i.e. dealing with the more important parts of the City first. By the 31st May all main roads were cleared of obstructions. Work is handicapped not only by lack of transport, (understandable) but also by a reported insufficient number of labourers (not understandable). Further, and much more, serious, reference is made to the "indifferent support of organized effort by higher officials" (Italian). This matter is being taken up by the Sub-Commission at once. A limited tramway system in Cagliari has been put in operation. The water supply of the City is now safeguarded by chlorination. Road maintenance throughout the Island by the Genio Civile continues to be good, but on ordinary water-bound macadam roads, which are in the great majority, rollers and water-carts cannot be provided for consolidation. This causes heavy increased wear on tyres. Such asphalt as is available has been devoted to airfield construction in the north of the Island. An indent has been submitted for the supply of 300 tons more. It is reported that some provincial and communal roads are being neglected due to lack of equipment and proper organization, on the Italian side. A technical report was made on a distillation plant at San Antico where Sardinian coal is used. The plant handles about 40,000 tons of this coal per annum. Gasoline of a low grade is produced, and about 300 tons of tar a year that is useful for road construction.

13 Finance.

(a) By the early part of May P.B.S. (Engineering Branch) had submitted details to this Sub-Commission of expenditure on repairs, debris clearance, structures, and engineering projects generally, dating from October 1943. The Deputy-Director of Works (Br.) had also submitted particulars of similar expenditure, covering materials and transport supplies during the months of February and March, in connection with Military Highways and Bridges. This

Declassified E.O. 12356 Section 3.3/NND No. 785019

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6430

(b) Certain practical difficulties arose during the month regarding prompt payment of contractors' bills, the Finance

Declassified E.O. 12356 Section 3.3/NND No. 784019

Ministry having failed to place necessary credits in certain banks at Naples, Foggia and Cata.ia. Since this militated against the rapid execution of urgent works representations were made, and the Finance Sub-Commission directed the Finance Ministry to extend and simplify their methods of payment.

(c) Similarly, on this Sub-Commission informing the Finance Sub-Commission that a relatively complete, and it is believed reasonably efficient, control is being exercised over Public Works expenditure generally the Minister of Finance (Italian Government) was asked by them to relax strict and specific financial control over each and every project. This should lead to greater expedition in execution.

(d) Reference was made (Para 12 (c) of the April report of this Sub-Commission) to the serious situation arising from the eruption of Vesuvius in March. Prospective expenditure was put at 370,000,000 lire. The Deputy-Director (Lt.Col.Rhodes) made a preliminary inspection of the mountain, the ravines, and the position in the villages at the foot of the northern slopes. The conclusion was arrived at that much of the work is urgent and cannot be postponed, but he expressed the opinion that the estimate mentioned was a "sterlingly high one". Later, in May, the Italian Finance Ministry apparently also became seriously concerned at the figures put forward by the Genio Civile, and took the matter up with the Finance Sub-Commission. Consulting us, they were furnished with a copy of the technical report (dated the 4th May). In the result it is understood that they have advised the Finance Ministry to withold sanction to the expenditure until the matter is much more fully investigated, in its engineering and policy aspects. The matter has been discussed, in the meantime, on three occasions with the Director-General (Genio Civile) or his Deputy, and they now clearly understand that the various projects cannot proceed until the most urgently required parts of the scheme, at any rate, are supported by proper plans, sections and estimates.

14 Information to Missions.

During the month such information as they required was given to Lt.Col.Patrick (of the War Office, London), and to Lt.Col. McMullen (Army H.Q., Cairo). These officers, respectively, spent a considerable time at the offices of the Sub-Commission and were given access to all files and records; answers were given to numerous questions.

15 Miscellaneous Matters.

(a) Information received since the last monthly report (April, but

Declassified E.O. 12356 Section 3.3/NND No. 785019

(d) [illegible] Sub-Commission) to the serious situation arising from the eruption of Vesuvius in March. Prospective expenditure was put at 370,000,000 lire. The Deputy-Director (Lt.Col.Rhodes) made a preliminary inspection of the mountain, the ravines, and the position in the villages at the foot of the northern slopes. The conclusion was arrived at that much of the work is urgent and cannot be postponed, but he expressed the opinion that the estimate mentioned was a "staggeringly high one". Later, in May, the Italian Finance Ministry apparently also became seriously concerned at the figures put forward by the Genio Civile, and took the matter up with the Finance Sub-Commission. Consulting us, they were furnished with a copy of the technical report (dated the 4th May). In the result it is understood that they have advised the Finance Ministry to withold sanction to the expenditure until the matter is much more fully investigated, in its engineering and policy aspects. The matter has been discussed, in the meantime, on three occasions with the Director-General (Genio Civile) or his Deputy, and they now clearly understand that the various projects cannot proceed until the most urgently required parts of the scheme, at any rate, are supported by proper plans, sections and estimates.

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(a) Information received since the last monthly report (April, but too late to be included in it), stated that in areas of the 8th Army, no less than 15,500 men were employed on roads and bridges, and they were paid over 2½ million lire in wages. The great volume of traffic was causing a steady deterioration in road conditions: first-aid repairs occupied all the gangs, but they could not keep pace with the wear and tear inflicted. 8th Army A.L.C. also reported that the destruction of the Pescara Dam by the Allied air forces, an operational necessity, might have serious repercussions later on the electric-power system on the north side of the mainland; particularly, in view of the considerable time that will be required to rebuild it. In the 5th Army A.L.C. areas there

6729

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

were special inspection of electric plants and power transmission line; and repairs materials for water supply were being built up from local resources.

(b) Reports were received from Regional Engineers regarding stores, plant and materials, possibly required between January and June, 1945. These are being examined and coordinated, to be available on the date required, viz.15 June.

(c) Following a communication from the Air Force Sub-Commission, the Executive Commissioner referred (to this Sub-Commission) the question of setting up an organisation for general salvage, e.g. scrap metal, tins, paper, etc. The opinion was expressed that this could only be done by and through Italian Municipalities and Communes but, unlike Local Authorities in England and America, they are completely unequipped for such a task. They have no organisation, very little transport, and for the larger towns (where the work might perhaps be worthwhile) it would be necessary to install mechanical plant, e.g. belt conveyors, baling machinery, etc. It is impossible to think of these at the present time. Above all, it is probably an under-statement to say that the South Italians is by no means "salvage-minded". Even in England it took 12 months of war to educate the population to the point of whole-hearted and voluntary cooperation. A similar process might take 20 years in this country.

The salvage Officer at H.Q., A.A.I. was consulted. Finally, A.C. and I.S. Section (in letter 401/9/SA dated 4 June 1944) informed the Air Force Sub-Commission that no action by A.C.C. is contemplated for the present. The letter also stated that there is actually a surplus of scrap metal in Italy at present, and difficulty in obtaining shipping space precludes the forwarding of quantities of any type of salvage either to the U.S.A. or to the U.K.

(d) A simplified system of refunds from the Genio Civile, monthly in arrear, was arranged.

(e) The Sub-Commission has been waiting for some weeks for data from the Public Safety Sub-Commission concerning their additional requirements regarding prison accommodation. As soon as this is received a scheme will be formulated.

(g) Referring to Para.10 of the April report (Malaria Control), the conference there referred to was followed by action, and the Public Health Sub-Commission (letter ACC/3005/HP dated 1 June 1944)

organisation, very little transport, and for the larger towns (where the work might perhaps be worthwhile) it would be necessary to install mechanical plant, e.g. belt conveyors, baling machinery, etc. It is impossible to think of these at the present time. Above all, it is probably an under-statement to say that the South Italian is by no means "salvage-minded". Even in England it took 12 months of war to educate the population to the point of wholehearted and voluntary cooperation. A similar process might take 20 years in this country.

The salvage Officer at H.Q., A.A.I. was consulted. Finally, R.C. no 5.3. Section (in letter 401/3/CA dated 4 June 1944) informed the Air Force Sub-Commission that no action by A.C.C. is contemplated for the present. The letter also stated that there is actually a surplus of scrap metal in Italy at present, and difficulty in obtaining enabling scrap precludes the forwarding of quantities of any type of salvage either to the U.S.A. or to the U.K.

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(g) Referring to Para.10 of the April report (Malaria Control), the conference there referred to was followed by action, and the Public Health Sub-Commission (letter ACC/3005/HP dated 1 June 1944) expressed special appreciation for assistance rendered, referring particularly to the "promptitude with which pumping stations have been put into operation in certain flooded areas", this being "a tremendous contribution towards the work of the Malaria Control Branch".

(h) The Genio Civile is still engaged in a survey of the state of engineering equipment at various ports (refer to Para.12 (e) of the April report). Concerning the same paragraph, it was finally settled, in May, that the Naval Salvage Branch will be responsible for all matters concerned with sunken ships in the ports.

6428

Declassified E.O. 12356 Section 3.3/NND No. 785019

(i) There was contact with the Air Force Sub-Commission concerning highways north of Rome, and particularly as to bridges (vulnerability). Various supplies were obtained at short notice for A.M.G. in the forward areas, e.g. several thousand shovels for the clearing of villages.

(j) The Sub-Commission has a well-equipped drawing office for plans and designs, with Italian personnel. During the month it was fully occupied in plans, designs and charts for various branches of our own activities, and also did work specially asked for by the Interior Sub-Commission on certain charts.

D.A. HENRY
Lt.-Col., C.E.
Director.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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CHAPTER VI

PUBLIC WORKS AND UTILITIES

I. GENERAL

A. Organization

1. The Public Works and Utilities Sub-Commission was created on 17 Sept. 1943 at Tizi Ouzou. Various studies were made and time was spent on planning for future operations. However, it was very soon apparent that, unlike other Sub-Commissions, the Public Works & Utilities Sub-Commission could do very little advance planning because of the fact that its principal function is that of reconstructing and re-habilitating destroyed facilities. For this reason this Sub-Commission is placed at a considerable disadvantage. As soon as new territories are occupied, it must send officers into these advanced areas and learn from first hand inspection what the damage is, and what must and can be done in the way of first-aid repairs to re-habilitate such facilities as water, sewers, electricity, streets, bridges, ports, buildings, etc.

2. A ten days trip was consequently made through Sicility in September, 1943 by automobile and public works problems were discussed with the men on the ground at that time. A few days gave convincing proof of the necessity of going to Sicility or to Italy at the earliest possible moment to get on the ground, and to get first-hand information as to what the real requirements were. It was also apparent that the "planning" done at Tizi Ouzou was wholly worthless in so far as public Works were concerned. As a consequence, upon his return to Algiers, the Director discussed this problem with General HOLMES and asked for authority to transfer the Sub-Commission to Sicility at an early date. On the 12 Oct. 1943 an Advance Party of all Sub-Commissions was sent to Palermo.

3. Every month since November, 1943 full reports on the work of the Sub-Commission has been submitted. Efforts were consistently made to ensure that the monthly reports (now covering a period approaching a year) should be a statement of results positively achieved; a consecutive record of difficulties encountered; what was done to overcome them; and indications as to what was intended in the near future.

4. The main objective of the Sub-Commission has been, and continues to be, the early restoration of public utilities and the progressive taking over of engineering and structural tasks from the 5th and 8th Armies as they advance Northwards, so as to relieve them of responsibility at the earliest possible moment and to enable large numbers of officers and men of the Corps of Engineers (American) and the Royal Engineers (British) to move forward. Correspondingly, close contact has always had to be maintained with the Chief Engineers of the Island Base Section (Sicily) and with the Peninsular Base Section (on the Mainland. - Headquarters at Naples, and recently elsewhere). Similarly, on the British side, there has had to be the closest coordination, on specified priorities which have changed from time to time, with the Chief Engineers of Nos., 1,2, and 3 Districts (Military.).

Declassified E.O. 12356 Section 3.3/NND No. 784019

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Everything else has been regarded as secondary to the taking over and prompt execution, through Italian agency, of innumerable engineering tasks, many of them being of considerable magnitude and some complexity.

6426

Declassified E.O. 12356 Section 3.3/NND No. 785019

5. At the Headquarters of the respective Chief Engineers an Engineer Officer of the Sub-Commission was posted; his duties being that of liaison on one side, and control of the activities of the Genio Civile on the other. (The "Genio Civile" is the term generally used as covering the Italian Public Works Department, which is responsible directly to the Italian Minister of Public Works).

6. Within the last few months there have been three different Ministers of Public Works in the Italian government, one of them being in office for less than two months, whilst the present one(Sig. Mancini) has now been in office about the same period. These political changes, occurring during a period of almost complete chaos in the internal organization of the Genio Civile, have acted as a severe handicap to continuity of policy and execution. The same points of policy and the same problems, in increasingly accentuated form, have had to be explained to successive Ministers, and their understanding and assistance invoked.

7. Another difficulty, found at the beginning, was the number of separate and semi-autonomous organizations found in Italy engaged on tasks which may be broadly described as "Public Works" but working along separate lines. The principal of these was probably the A.A.S.S. ("Aziende Autonome Strade Statali") which concerned itself with highways and bridges. Another was an organization dealing with land-reclamation for agricultural purposes and also carrying out remedial works of an anti-malarial nature ("Bonifiche") There were others on a parallel plane, not to mention Municipal engineering staffs, Communal, and so on. It was almost impossible to deal with these as separate entities, and therefore over a period of months orders and instructions were increasingly channelled through the Minister and through his Director-General (corresponding to Chief Engineer). Some confusion continued until comparatively recently, when the Minister published a Decree legally and finally abolishing the A.A.S.S. In Sicily, some time ago, the Minister (at our request) brought under direct control the technical staffs serving several separate Departments - e.g. railway, housing, public health, etc.

The different units and agencies have had to be brought under one control as a part of the Sub-Commission's activities, but their existence (peculiar to the Fascist organisation of the country) did militate against rapid action from time to time. There were misunderstandings both administrative, technical, and financial, and it has taken a long period to get these "straightened out". Particularly the latter as to provision of funds, prompt payment of contractors' bills, methods of accounting, and other details on which a "lead" had always to be given by us.

8. In the early operations of the Sub-Commission it laboured against two handicaps.

a. By not being permitted to get on the scene of action early enough to help the Regional Engineers in their struggle with countless difficulties, and thus holding back our various experts, whose assistance was needed in the Regions, and

b. The Regional Staffs functioned, as independent little watertight units, where officers from H.Q. were frowned

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b. The Regional Staffs functioned, as independent little watertight units, where officers from H.Q. were frowned upon and considered as interlopers when they appeared in any Region. H.Q. had to beg for information and cooperation, and when it was given, it was only casual and with reluctance.

Declassified E.O. 12356 Section 3.3/NND No. 785019

this lasted until, at a Staff Conference with all Regional Commissioners, held on 14 April 1944, at Naples, General Mac Farlane made the position of the Sub-Commissions very clear to Regional Commissioners, and requested their full cooperation. It was not until that date that M.A. were able to begin to function properly, and to direct the work in the Regions with some authority.

That was one of the principal reasons why, when the Armed Forces asked the Sub-Commission to take over the Military Highway program (in Jan. and Feb. 1944) it was organized as a H.Q. function, since in that work the Sub-Commission had to have absolute authority and be able to cut across Regional boundaries where needed in the effort to serve the Armies.

B. Military Works.

1. The day-to-day work of the Sub-Commission has probably been more bound-up with the advance of the Armies, and with the wishes of the Army Commanders as expressed through their Chief Engineers, than any other Sub-Commission in the Economic Section. Its activities have always been guided, and subordinated to that main purpose. It is claimed, moreover, that in this it has been successful.

2. Leaving out for the moment the deplorably damaged state of the highways and bridges in Sicily, and public utilities serving its principal cities, when the Sub-Commission arrived at Naples in December 1943 a most pressing problem presented itself. It was asked by Advanced A.F.H.Q. to to take over responsibility for over 2,000 Kms. of military highways in the whole area from Reggio and Brindisi, up to Naples and Foggia, together with the reconstruction of many hundreds of destroyed bridges. This program was immediately followed by heavy additional mileages north of Naples, extending right up almost to the Combat Zone, and also further mileages north and east of Foggia. The latter tasks were specifically entrusted by the Chief Engineers of the 5th Army and Peninsular Base Section, and the former by by the Director of Works, A.A.I. They necessitated the immediate setting up of a special organisation by the Genie Civile, and the selection (from a T/O far below strength) of a number of the Sub-Commission's Engineer officers to work with, and control them.

3. Each of the Regions had at that time a nucleus Engineering Staff that concerned itself not only with Public Works matters (including Utilities), but also with "Communications" which embraced such things as transport, telephones, and telegraphs. The staff was largely engaged in these latter tasks, and they had neither the time nor the specially experienced personnel to take over a highways and bridges program of such size and urgency. For a period of about 6 months, therefore, this special highways and bridges program was operated directly from the Sub-Commission Headquarters, under grave handicaps of various kinds. One of these was that in the early months of this year it was almost impossible to transmit orders by telegraph; there was no telephone service to distant places, and even a letter might take two weeks before it was delivered. Further, there was an inevitable amount of overlapping and misunderstanding. Regional Commis-

Declassified E.O. 12356 Section 3.3/NND No. 785019

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4. By the month of May progress in meeting these tasks, and our control over Regional engineering staffs was such, that it became possible to consider the unification and integration of all engineering activities

6/2

Declassified E.O. 12356 Section 3.3/NND No. 785019

under the respective Regional Engineers. The actual change took place on the 15 June 44 and since then it has worked increasingly satisfactorily. Regional Engineers continue to have responsibility for certain transport and communication questions on the staff of the respective Regional Commissioners, but their main function is now the control of the Engineer Officer personnel under them in all matters pertaining to highways, bridges, buildings, land-reclamation, repairs of war damage, electric power production and the working of a complicated rationing system, together with the operation of major public utilities such as water-works, gas, sewers, etc. In a technical and professional sense they are responsible to the Sub-Commission. On the spot they are available as advisers, to the Regional and Provincial Commissioners.

5. When it is considered that the Sub-Commission did not even have a spade or a wheelbarrow at its disposal, and had to beg, borrow or steel equipment for these tasks, it is a wonder that as much progress was made. Proof that the work which the Sub-Commission has done in direct relief of the Armed Forces, has been carried out to their satisfaction, may be found in the fact that the Armed Forces are still turning over to the Sub-Commission works, in increasing numbers.

C. War Damages.

1. Whilst the Islands (Sicily and Sardinia) and considerable portions of Southern Italy have decreased in importance in a Military sense, with a corresponding reduction in our Engineering personnel, responsible for them, there has been a continually increasing responsibility as the Armies have advanced northwards. On balance, the work of the Sub-Commission is at present (Sept. 1944) heavier than it has been at any time in the last 11 months. This is brought about not only by the ever-extending geographical areas to be covered, but also by the heavily increased degree of war damage that the retreating enemy has inflicted on the country. In the electrical field alone, for example, Central Italy shows complete destruction of generating capacity (hydro-electrical and thermal stations) of the order of well over 90%. In Sicily only the thermal stations were destroyed, and in Sardinia not even these. In South Italy, generally speaking, the principal hydro-stations were left intact, although there were grave other electrical damages, sufficient to make it necessary last February to impose over the whole of the country south of Naples a sever electrical rationing system. The working out of this, and more particularly its actual enforcement, involved an immense amount of work on the Electrical division of the Sub-Commission. The Central Italy position is, by comparison, plainly disastrous. A far stricter rationing system has to be involved, and every kind of temporary expedient to cover first-aid repairs is being adopted. Even with this we cannot hope, within the next 3 or 6 months, to bring back into operation more than about 5% of the destroyed productive capacity. The Central Electricity Board was dissolved in July at short notice. All its functions became merged in those of this Sub-Commission, probably quadrupling its responsibilities.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

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2. Again, in the field of highways and bridges, systematic destruction by the enemy in the whole area from Cassino to Florence is found to be more serious than ever. The Armies cannot leave behind them for an indefinite period portable steel bridges (generally of the "Bailey-type"), and dates are continually being fixed, quite rightly, by which on even an important highway (Military lines of Communication) such a bridge has to be taken forward and substitute provided, either of a temporary or semi-permanent nature. Some of these bridges were found to have been left behind even as far away as Sicily, quite recently.

Declassified E.O. 12356 Section 3.3/NND No. 768019

from there, and in the South of Italy practically all have now been transported to the North, with substitutes, designed by the Sub-Commission in conjunction with the Genio Civile, of one kind or another, being undertaken.

D. Miscellaneous

1. Administration. Over a period of months, with activities constantly expanding, the volume of correspondence has greatly increased, viz. to and from Stations and Units within A.C.C. itself, with Regional Engineers in the field, Regional and Provincial Commissioners and others; also with Directors of Works, Chief Engineers, and other Army Units, and with numerous Italian organisations from the Ministry of Public Works downwards. To this is to be added technical reports of all kinds, and control of a drafting-room staff (plans and projects).

2. Office Staffs. A nucleus staff was got together in North Africa at Tizi-Ouzou in September-October 1943, and again a new one between October and December at Palermo. This was supplemented by Italian civilian staff, and in December/January, when the Sub-Commission moved to Naples, an entirely fresh office staff had again to be engaged and trained. Also in July '44, when a further transfer was made from Naples to Rome. The language difficulty, already acute, was made much worse by these inevitable transfers and changes. No sooner did the Italian staff reach a certain minimum standard of efficiency than it had to be left behind and a new staff engaged. English speaking short-hand typists were conspicuous by their absence.

American and British EM/OR were very small in number, they had no specialised office experience, and they were also continually changed. As to the control staff, of officer status, in common with other Economic Sub-Commissions, the Sub-Commission has never had an adequate number of personnel.

3. Reduction of Output. Compared with conditions in America or England, in this matter of administrative control, the factors taken together have probably resulted in both the quantity and the quality of output, being about 50% below what one would expect it to be, with a normal office staff. The time of senior officers has been too much occupied in tasks that should have been carried out by suitably trained subordinates. The Sub-Commission should have had, months ago, anything up to half a dozen such men or women (Service or civilian), but it has never had even one. Time that should have been devoted to strictly professional and technical work, viz. re-organising and re-vitalising the Genio Civile to meet military and civilian needs, has had to be spent in writing and re-writing letters and reports by hand, and checking and re-checking them after they have passed through the hands of an ever-changing office personnel, amongst whom it is the exception to find anyone even moderately experienced and efficient.

II ORGANIZATIONAL PROBLEMS.

A. Italian Public Works Part. (Genio Civile)

Declassified E.O. 12356 Section 3.3/NND No. 785019

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A. Italian Public Works Dept. (Genio Civile).

1. Referring to external matters, i.e. the carrying-out of a large Public Works program, the difficulties encountered in the various Regions through lack of transport for materials, and lack of structural materials themselves, will be noted later in this report.

2. Generally speaking, immediately after the armistice in September 1943, the Italian Public Works Department found itself almost completely without transport, plant, and equipment. The same applied to its principal firms of contractors. Almost everything had been either taken north by the Germans or destroyed by them. In some cases, no doubt,

Declassified E.O. 12356 Section 3.3/NND No. 78509

transport and equipment may have been hidden away; first of all to protect it from the Germans, and in the second place to try and avoid requisitioning by the Allied Armies. But the amount so dealt with was small, in comparison with what had been destroyed or taken north. The Genio Civile was also extremely short of engineering personnel in the supervisory grades, many being in the north of Italy voluntarily or otherwise, others in (Ltd ion) Army service, and others still prisoners of war in Africa, India, or elsewhere. (Attempts have been made repeatedly by the Sub-Commission to get back between 20 or 30 such prisoners of war, but so far without success.).

3. The end of 1943 saw the Italian Public Works Department in a state of complete chaos as to organisation, notably lacking in experienced personnel, and with literally neither plant, equipment nor supplies of materials.

4. By way of assistance this Sub-Commission could and did help in the matter of personnel, i.e. our Engineer officers regularly assumed technical responsibilities that should have been wholly shouldered by the Genio Civile. This still continues, and must probably go on for some time. It could give nothing else, by way of actual assistance. (No vehicles, no plant, no tools; not even a wheelbarrow).

5. The program of reconstruction in South and Central Italy thus facing the Genio Civile, even on a minimum scale amounting to little more than first-aid repairs, was an enormous one. It still remains so. Their resources were next to nil, and in the absence of re-starting factories or getting in large quantities of imports, those resources are still almost negligible. Factories producing even simple things like cement, bricks and tiles cannot be restarted because of lack of suitable fuel for burning them. There is a desperate shortage of these primary materials, and their allocation even in minimum quantities is a source of continual consideration, and re-consideration. The Armies are operating some of these plants and are taking all they can get. Their needs must always come first. Steel is virtually unobtainable, and timber only in most limited quantities. Factories that might produce engineering and structural materials even of a simple type (excluding machinery altogether) cannot be re-started because of the destruction of electrical generating plants. There is no electricity, and on this they are wholly dependent.

B. Transport.

1. The only transport equipment available for assignment to the Sub-Commission was 6 jeeps to be used exclusively in military highway reconstruction and these were taken away before the move to Rome. Throughout the months when Headquarters were at Naples, the getting of even a few cars of jeeps (to carry out essential tours of inspection) was an endless pre-occupation. It was only after arriving in Rome that even this ceased to be a major handicap.

2. Such vehicles for Allied officers, and for supervisory officials of the Genio Civile are however only a minor fraction in comparison with the transport required for materials for the reconstruction of hundreds of miles of highways, an equal number of bridges, buildings, and other war damage repairs needed over distances of hundreds of miles.

Declassified E.O. 12356 Section 3.3/NND No. 788019

technical responsibilities that should have been wholly shouldered by the Genio Civile. This still continues, and must probably go on for some time. It could give nothing else, by way of actual assistance. (No vehicles, no plant, no tools; not even a wheelbarrow).

5. The program of reconstruction in South and Central Italy thus facing the Genio Civile, even on a minimum scale amounting to little more than first-aid repairs, was an enormous one. It still remains so. Their resources were next to nil, and in the absence of re-starting factories or getting in large quantities of imports, these resources are still almost negligible. Factories producing even simple things like cement, bricks and tiles cannot be restarted because of lack of suitable fuel for burning them. There is a desperate shortage of these primary materials, and their allocation even in minimum quantities is a source of continual consideration, and re-consideration. The Armies are operating some of these plants and are taking all they can get. Their needs must always come first. Steel is virtually unobtainable, and timber only in most limited quantities. Factories that might produce engineering and structural materials even of a simple type (excluding machinery altogether) cannot be re-started because of the destruction of electrical generating plants. There is no electricity, and on this they are wholly dependent.

B. Transport.

1. The only transport equipment available for assignment to the Sub-Commission was 6 jeeps to be used exclusively in military highway reconstruction and these were taken away before the move to Rome. Throughout the months when Headquarters were at Naples, the getting of even a few cars of jeeps (to carry out essential tours of inspection) was an endless re-occupation. It was only after arriving in Rome that even this ceased to be a major handicap.

2. Such vehicles for Allied officers, and for supervisory officials of the Genio Civile are however only a minor fraction in comparison with the transport required for materials for the reconstruction of hundreds of miles of highways, an equal number of bridges, buildings, and other war damage repairs needed over distances of hundreds of miles.

3. These tasks having been handed over by the Armies, and on military priorities, it required months of almost superhuman effort to get (from the Armies) trucks and lorries in even inadequate numbers. When they were obtained, finally, they were in poor condition and often

Declassified E.O. 12356 Section 3.3/NND No. 785019

only 50% of them could be put "on the roads" at any given time. Provision of drivers, spare parts, petrol and lubricants, responsibility for garaging and control, and other matters presented great difficulties. They were solved to some extent (but even now incompletely) in conjunction with the Army on one hand, and the Genio Civile on the other. Supplies of stone, machinery for quarries operations, steam-rollers for roads, cement and bitumen and many other things were arranged in part through the Armies, and in part through the Genio Civile and their contractors. But this only applied to specific repair and reconstruction operations of direct military importance and on military priorities. It was a case of continually buying, begging or borrowing; in fact, anything and everything short of stealing. When such equipment was found many parts were missing, and our Engineers had to spend a disproportionate amount of time in trying to help the contractors in finding parts, and then find shops who could repair such parts and put them together. This was particularly true for such items as steam-rollers, crushers, and trucks.

However, contractors woes were our woes, and whilst they existed no results could be produced.

C. Requisitions.

1. In March 1944 a very large consignment, approximating 4000 tons in weight of heavy engineering plant, equipment, and transport, was requisitioned for from the United States. Washington concealed the order, but the Director of Works A.A.I. sent a cable urging reconsideration as this was needed to permit the Armed forces to use their own equipment in forward areas. There is no information as to when it may arrive, either in whole or in part.

D. Utility Companies.

1. Apart from the Genio Civile itself, all the Public Utility Companies in South and Central Italy, providing engineering services such as gas, water and electricity, are at present in a semi-paralysed condition because of lack of transport. Even where they have a few vehicles left these have no tyres, or their tyres are in an almost worn-out condition. The daily life of the people depends on these things, and the Armies also require (at least) water and electricity. Repair works even on a minimum scale are continually being delayed. Utility Companies have given warning that they can not be held responsible for breakdowns in service if they are unable to go to the scene of trouble and make repairs. Materials and spare parts for these Utility Companies are also most difficult to get. Their reserves are exhausted, such as they had, and the method of supply to our Regional Engineers (through Regional Supply Officers) is most unsatisfactory. The "Local Resources Boards" has a monthly meeting, and the results of that meeting, if favourable as to allocation, may be that they are informed that the material is available 100 miles away. An officer [illegible] has to be detailed to go with transport to fetch it,

Declassified E.O. 12356 Section 3.3/NND No. 785019

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2. The Companies are faced with enormous bills for war damage repairs, and their financial position is precarious.

3. Current revenues are in many cases very low due to (a) destruction of parts of their plant, (b) stoppage of industries, (c) damage to consumers' houses, (d) departure of population and (e) the rise in prices. The Italian Government has been asked to arrange a special system of financing, so that at least first-aid repairs can go ahead [illegible]

Declassified E.O. 12356 Section 3.3/NND No. 785019

4. The Sub-Commission has dealt in detail with many applications from the companies to be allowed to increase their charges - varying from 100 to 500% above pre-war scales. Some have been allowed, some reduced, and some disallowed.

B. Regional Engineers (Other Duties).

1. Reference has been made to the nucleus Engineering staff found in the Regions and the fact that they were responsible for other things beside Public Works. In Region I (Sicily), for example, the officer responsible dealt (in addition) with road and rail transportation; mining, telecommunications, and Marine works such as lighthouses. Convenient as it may have been for Senior Civil Affairs Officers, and more recently Regional Commissioners, to have all these various subject under one control, experience has proved that no single individual can have either the experience, the qualifications, or indeed the necessary time to deal adequately with them. This has been a real difficulty, and apart from the objections to it mentioned, there is the addional one that the officer in charge has had to be responsible to different Sub-Commissions of the A.C.C., instead of to one Sub-Commission.

XII. ELECTRICITY UTILITIES

A. General

1. Italy hasdeveloped its Hydro-electric power largely for the reason that fuels for the production of electricity were not available within its territory. As a result the whole economy of the country both industrial and domestic has been geared to its Hydro-electric power resources.

2. This fact has been recognized by the enemy and he has carried on a definite program of demolition and mining directed at the electric power resources of the country for the purpose of hampering the Allied war effort. The effect has been that factories, railroads and food processing plants have been unable to function, with resulting unemployment requiring the importation of food and finished products, in order to carry on military operations and keep the civilian population alive.

3. The Utilities Division of the Public Works Sub-Commission of A.C.C. has been charged with the overall program of conserving and restoring this vital natural resource, keeping in mind at all times the military necessity of the situation. Therefore close relations are maintained with the engineering units who perform first aid work in the first and second phase operations.

B. Sicily.

1. In 1942 the island of Sicily had an electric generating plant capacity of,

Declassified E.O. 12356 Section 3.3/NND No. 784019

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B. Sicily.

1. In 1942 the island of Sicily had an electric generating plant capacity of:

Hydro	39,250 KW
Steam	38,400 KW
Diesel	2,800 KW
Total	80,450 KW

2. The power companies were actually short of generating capacity and had more potential market for electric power than they could supply. In late years they had confined their electric development to

Declassified E.O. 12356 Section 3.3/NND No. 785019

Hydro-electric projects. The original plants were Thermal stations, the principal ones being located in Palermo, Catania and Porto Empedocle.

3. The island had an adequate transmission line system which interconnected the plants. These lines, however, were considerably damaged by combat operations in some areas which required many months to repair andget back into operation. The principal difficulties were repair materials, conductors and transport.

4. The 70,000 volt trunk line connecting the east and west side of the island was not repaired until May of 1944, nearly a year after the enemy was driven from the island. In order to obtain sufficient conductors to make this repair it was necessary to recover and salvage most of the over-head trolley wire from the street car system of the city of Messina.

5. The steam power plants were in a bad state of repair from lack of maintenance and damage sustained from shell fire and bombing operations. Repairs of an emergency nature were effected in order to provide power for port facilities military and essential civilian services. Repair work extended over a period of 9 or 10 months.

6. The speed with which the enemy was driven from the island prevented any major sabotage operations to the Hydro-plants. Much deferred maintenance was evident and lack of materials delayed repairs. In addition the period previous to the invasion was an unusually dry season resulting in lower, than normal water stages in the Hydro-electric plant reservoirs.

7. As a consequence electricity on the island had to be quite severely rationed and service was only allowed to military and essential civilian operations. The principal civilian operations were hospitals, flour mills, olive oil presses, bakeries, wineries and other food processing plants. Water supply systems were classed in the category of military requirements, other military requirements were hospitals, docks and shipyards, cement plants, foundries, machine shops , sulphur mines.

C. Sardinia.

1. The Electric Utilities on the Island of Sardinia have escaped the damage that was experienced on the mainland of Italy. The plants are, however, showing the effects of lack of maintenance brought about by material shortages. Quantities of needed supplies and repair materials have been requisitioned and information has been received that shipment can be expected in due course.

As a result the situation on the island can be considered as good. There is, however, a shortage of tires and tubes which tend to handicap the operating functions of the companies.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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2. The "effective" generating capacity on the island is as follows:

Hydro	42,300 KW
Thermal	53,600 KW
Total	95,900 KW

D. Southern Italy.

1. In the Sila mountains in Calabria there is a group of Hydro-electric generating plants known as the "Sila Group". 6/22

Declassified E.O. 12356 Section 3.3/NND No. 785019

The total capacity at the "Sila Group" is 170,000 KW and this was only slightly damaged. Repairs were effected to most of the equipment shortly after the enemy was driven from the territory.

2. The enemy's failure to demolish the "Sila" plants has contributed in a large measure to the success of the Allied military operations during the Italian campaign. The saving of this very large plant from destruction has been attributed to bands of patriots, composed of employees of the company owning the plants, preventing the Germans gaining access, and to the speed with which the Allied forces conquered Southern Italy. The latter probably prevented the enemy from placing mines, which require some time to prepare, in order to do an effective job. The plants are difficult to get to and situated in a mountainous, rugged section of the country.

3. As the enemy retreated northward, however, he had more opportunity to plan and carry out demolition work at power plant installations. The attached separate report on "South Italy" dated 26 Aug 44, sets forth the present situation. (Appendix B).

The transmission line system of "South Italy" was damaged by shell fire and bombing. The main 150 KV system was, however, put back into operation within a few months. This line runs from the "Sila" plants north along the west side of Italy to Naples and along the east side of Italy to Taranto, Bari and north to Foggia. This grid provided the necessary arteries for distributing the available power and for the purpose of collecting power from generating stations that were left undamaged or were repaired.

5. Total requirements for 1942 were 1,800,000,000 KW with a system peak demand of 295,000 KW of this amount Industrial customers used the following quantities:

	KW Demand	KWH
S.R. railroad lines	22,000	125,000,000
Montecatini (Crotone)	43,000	330,000,000
Pertusola (Crotone)	7,000	55,000,000
Anic refinery (Bari)	500	400,000
S.R. railroad lines (Foggia)	14,000	80,000,000
Cotton mills (Salerno)	1,500	4,000,000
Ilva (Torre Annunziata)	4,000	15,000,000
Alfa Romeo (Pomigliano)	3,000	9,000,000
Ilva (Bagnoli)	13,000	115,000,000

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Alfa Romeo (Pomigliano)	3,000	9,000,000
Ilva (Bagnoli)	13,000	115,000,000
Cotton mills (Naples)	4,000	6,000,000
Paper mills (Chieti)	3,000	16,000,000
Railroad (Sangro Valley)	1,500	4,000,000
Bussi Chemical plants (Pescara)	10,500	60,000,000
Line loss on delivery to R.R.	7,000	25,000,000
Total large industrial	134,000	844,400,000

Declassified E.O. 12356 Section 3.3/NND No. 785019

6. The comparison that can be drawn between the year 1942 and the present time is as follows:

	Demand in KW	Units of Electricity KWH
Year 1942	295,000	1,800,000,000
Year 1945 (based on present monthly consumption)	125,000	700,000,000
Annual loss in Electric consumption in Southern Italy	170,000	1,100,000,000
Percentage loss 1942/1945 year	58%	61%

7. A part of this loss is represented by industries which have not resumed operations since the occupation due to damage and lack of raw materials. This is estimated at 115,000 KW of demand and 900,000,000 KWH, annually. This left about 55,000 KW of peak load and 200,000,000 KWH that had to be denied civilian users who formerly used this.

8. To control the use of power by both the military and civilians, a committee known as the Local Resources (Italian) Board, electrical committee, was formed on which AFHQ was represented by a member of this Sub-Commission. Each month this committee examined the power availability and allotted quantities to various districts in the territory. This committee also considered all requests for blocks of power required by industries which were to resume operations either for military purposes or essential civilian needs.

9. Early in 1944 it became evident that economies in the use of electricity by non essential civilians would be necessary. To meet this situation arrangements were made by the Public Works and Utilities Sub-Commission A.C.C. with the Italian Government, through the Ministry of Public Works, to issue a Royal Decree directing all civilian users of electricity to reduce their consumption. This decree became law on April 5, 1944.

10. As a result of the control instituted over the use of power, the reservoir position was improved to the point where the water in storage equalled the best year that had been experienced in the last four years. This program has permitted the orderly resumption of some important industries and insured that power to operate them would be available when needed.

11. In certain areas special treatment was necessary in order to reduce the consumption of power. In Apulia, comprising most of east Italy in the southern area, the load was exceeding the allotment both as to [illegible] and units. In addition an important military railroad was due

Declassified E.O. 12356 Section 3.3/NND No. 785019

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11. In certain areas special treatment was necessary in order to reduce the consumption of power. In Apulia, comprising most of east Italy in the southern area, the load was exceeding the allotment both as to peak and units. In addition an important military railroad was due to begin operation in April 1944 requiring a block of 6000 KW. In order to meet this situation and to reduce the excess load being taken, the Sub-Commission found it necessary to remove approximately 12,000 KW or about 25% of the system peak load in the Apulia area. This was accomplished by selecting certain feeders and arranging that service on them be entirely discontinued during specified periods each day. Simultaneously an intensive advertising program was carried on through local newspapers, posters, and company employees asking the electricity users to conserve their use of power during certain hours of the day. In addition the area

Declassified E.O. 12356 Section 3.3/NND No. 785019

was divided into seven sections and each section allotted a rest day using different days of the week. All industries in a given area were required to observe the rest day assigned on penalty of having their service discontinued. This was equivalent to reducing the system peak by 1/6. This program produced excellent results in that the system load was reduced from 46,000 KW to about 39,000 KW. As the public response became more evident it was possible to restore all feeders which were being interrupted to full 24 hours service at the end of one month's time, and the load has not exceeded the allowable limit of 42,000 KW at any time since then. This included the service required by the Military railroad mentioned heretofore.

12. In another area the substation capacity in the vicinity of Naples was being exceeded and in addition an industrial load of military necessity required additional power for increased production requirements. In this case the Sub-Commission found it necessary to physically disconnect non-essential users from the lines entirely in order to accomplish the necessary reduction in load. It will be seen therefore that the Electrical rationing schemes developed and put into operation by A.C.C. were responsible for making the electricity available for military and essential civilian services. By careful management a limited supply was given to the civilians which without a proper control would not have been possible.

13. Before transmission service was available to the Naples area, in the early days of occupation, power was obtained by utilizing the generating plants of submarines which were found more or less intact in the Naples harbour. These plants helped to produce enough power to get part of the water system operating and give service to some important establishments. An undamaged Diesel engine at the Volturno plant was also utilized.

14. The 45,000 KW Cepusso steam plant located in Naples was thoroughly mined by the enemy but due to faulty detonation only portions of the boilers and turbines were damaged. Work of repair was started immediately by the Royal Navy and the first unit of 15,000 KW was placed on the line in May 44. The second unit of 15,000 KW began operating August 44. The third unit of 15,000 KW will be restored shortly.

15. In all the work of reconstruction the principal difficulties encountered were shortage of insulating materials for the repair of transformers and generators. The lack of automotive transport together with tyres and tubes caused difficulties carrying out repair work. The military units in the area have loaned transport to help out. The companies are however in dire need of additional transport, tyres and tubes to carry on the maintenance and repair work necessary to keep the electric system in reasonable operating condition.

16. The Sub-Commission initiated orders for insulating repair materials in January and February of 1944 and they began arriving in August 1944. The supplying of such material will permit the utilities to repair equipment that otherwise remains useless and will eliminate the necessity of importing manufactured transformer and generator

Declassified E.O. 12356 Section 3.3/NND No. 785019

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16. The Sub-Commission initiated orders for insulating repair materials in January and February of 1944 and they began arriving in August 1944. The supplying of such material will permit the utilities to repair equipment that otherwise remains useless and will eliminate the necessity of importing manufactured transformer and generator windings.

17. The delay in delivery of simple lightweight material such as insulating material for electrical repairs slows down the rehabilitation work very materially.

Declassified E.O. 12356 Section 3.3/NND No. 785019

E. Central Italy

1. During the winter of 1944 while the combat lines were more or less stabilized, the enemy was able to arrange for and put into effect a well planned program of mining and demolition of electric utility facilities in Central Italy. The work was done by persons experienced in demolition and familiary with electric power machinery.

2. Out of a total of 862,000 KW of capacity, after some early rehabilitation, only about 57,000 KW is capable of being operated, at the present time. Of the 57,000 KW, 30,000 KW is located in the City of Rome which the enemy did not destroy.

3. With the program which the Sub-Commission has worked out with the various power companies for rehabilitation of certain selected plants and the relocation of others, it is estimated that the following productive output capacities will be available:

Sept. 1944	58,000 KW
Oct. "	76,000 KW
Nov. "	88,000 KW
Dec. "	114,000 KW
Jan. 11945	155,000 KW
Feb. 1945	154,000 KW

The drop in production capacity Feb. over Jan. is due to the expected lessening of rainfall.

4. Here again the need for insulating materials, trucks, tyres and tubes will be of utmost importance in carrying on the scheduled program of rehabilitation.

5. In the City of Rome the use of power has been severely curtailed in order to provide for the needs of the military and essential civilian services. This can best be proved by the fact that in normal times the peak demand of Rome was about 110,000 KW. At the present time and for several months to come Rome will not have more than 55,000 KW available, indicating that not much more than 30% of the city's normal activities will be able to function.

The unessential civilian users are allowed electric energy once every four days for a period of 16 hours.

6. From the tabulations on the power situation in Central Italy it is apparent that the repair of the electric plants will require many months, in fact several years to complete.

In the meantime the need for generating capacity is such that it is necessary to ask for the use of special generating plants in the form of floating power plants.

It has been determined that two 30,000 KW floating units for a period of several months will get Central Italy through a difficult [illegible] and will provide power to accelerate the restoration of

Declassified E.O. 12356 Section 3.3/NND No. 785019

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It has been determined that two 30,000 KW floating units for a period of several months will get Central Italy through a difficult period and will provide power to accelerate the restoration of essential industries as well as providing the power to operate factories and shops needed to make repairs to the generating stations to be rehabilitated. Afterwards, these plants can be moved to other areas to perform a similar duty.

6128

Declassified E.O. 12356 Section 3.3/NND No. 785019

7. In addition to the large units mentioned above a number of small portable units have been asked for as follows;

10 units - 25 to 50 KW Capacity
10 units -100 to 200 KW Capacity
10 units -300 to 400 KW Capacity
5 units - 2000 KW Capacity

Total capacity is 15,000 KW (approximate)

It is the intention to use these units to render initial service to important establishments, such as flour mills, water systems, hospitals and food processing plants, mines, etc. These units can be moved from place to place as the need arises and will provide power until generating and transmission line facilities can be restored to important centers of population.

8. Our Engineer officers are busily engaged in working out plans and getting repair work underway towards the rehabilitation of those plants which can be put back into operation during the next six months. This entails close attention to the work being carried on in order that necessary materials and contacts with military authorities and organizations are maintained. Repair materials and supplies, gasoline, transportation and food for heavy workers rations are some of the important liasons functions that are carried out. Close collaboration and frequent conferences are held between officers of the Sub-Commission and officials and engineers of the power companies, regarding plans, progress of work and obstacles encountered. The engineers of Ministry of Public Works of the Italian Government are also kept in close contact with the rehabilitation work in order to build up harmonious relations between the Government and Power companies.

9. The Sub-Commission has electrical officers located in each of the activated regions who deal direct with problems and restoration work arising in those areas. Lack of personnel has hampered the work in the past and some additional officer personnel has been assigned in the last two months to overcome this difficulty. The Utilities Division of the Sub-Commission now totals 20 electrical officers. An additional 15 Civilian Engineers and technicians are employed in order to carry on this important work.

F. Northern Italy.

1. A study is being made of the electrical facilities in Northern Italy and the electrical officers who are to go in the Northern Regions of Italy are developing plans in an endeavour to meet any emergency conditions which may arise similar to that encountered in Central Italy.

2. Fully 80% of the electric power producing plants of Italy are located in the North as well as most of the large industrial oper-

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3. In view of the damage and demolition which has been wrought by the enemy in Central Italy, considerable concern exists as to what the situation will be and whether the enemy will carry on the scorched earth policy in the North of Italy.

Declassified E.O. 12356 Section 3.3/NND No. 785019

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